BILL NO. 2003-83

ORDINANCE NO. 5636

AN ORDINANCE TO ADOPT AS THE CITY'S BUILDING CODE THE 2003 EDITIONS OF THE INTERNATIONAL BUILDING CODE AND INTERNATIONAL RESIDENTIAL CODE, TOGETHER WITH AMENDMENTS THERETO, AND TO PROVIDE FOR OTHER RELATED MATTERS.

Proposed by: Paul K. Wilkins, Director of Building and Safety

Summary: Adopts the 2003 Editions of the International Building Code and the International Residential Code, together with amendments thereto.

THE CITY COUNCIL OF THE CITY OF LAS VEGAS DOES HEREBY ORDAIN AS FOLLOWS:

SECTION 1: Title 16, Chapter 4, Section 10, of the Municipal Code of the City of Las Vegas, Nevada, 1983 Edition, is hereby amended to read as follows:

16.04.010: A building code is established and adopted [as and for the City's Building Code, and consists of the following documents, which are adopted by reference as if set forth herein and three copies of each which are on file in the Office of the City Clerk:] for the City. The building code adopted by this Section, to be known as the City's Building Code, shall consist of the following documents, which are adopted by this reference and a copy of which shall be maintained on file in the Office of the City Clerk:

(A) The publication entitled ["The Uniform Building Code, 1997 Edition,"] "International Building Code, 2003 Edition," as modified herein, including all [chapters contained in the Appendix, with the exception of Chapter 3, Division III; Chapters 4, 10, 16, 19, 21 and 23; and Chapter 31, Division I.] Appendices other than Appendices A, B, D and G, which are not adopted. This publication, as modified, is designated as Part 1 of this Chapter.

(B) The document entitled ["1997 Southern Nevada Building Code Amendments" as modified herein,] "City of Las Vegas Amendments to the 2003 International Building Code," which amends, by adding to and deleting from, certain sections of the [Uniform Building Code, 1997 Edition, which] International Building Code, 2003 Edition. If adopted by other local jurisdictions, the document may also be known as the Southern Nevada Amendments to the 2003 International Building Code. This document is adopted as Part 2 of this Chapter.

040433

(C) The publication entitled the "International Residential Code for One- and Two-Family Dwellings, 2003 Edition" (also known as the "International Residential Code, 2003 Edition"), as modified herein, including all chapters contained therein, with the exception of Chapters 12-42, which are not adopted, and including all Appendices other than Appendices A-G, Appendices I-J, and Appendix L, which are not adopted. This publication, as modified, is designated as Part 3 of this Chapter.

(D) The document entitled "City of Las Vegas Amendments to the 2003 International Residential Code," which amends, by adding to and deleting from, certain sections of the International Residential Code, 2003 Edition. If adopted by other local jurisdictions, the document may also be known as the Southern Nevada Amendments to the 2003 International Residential Code. This document is adopted as Part 4 of this Chapter.

SECTION 2: Title 16, Chapter 4, Section 20, of the Municipal Code of the City of Las Vegas, Nevada, 1983 Edition, is hereby amended to read as follows:

16.04.020: The Director of the Department of Building and Safety of the City, or his authorized representative, is designated as the Building Official referred to in the [Uniform] City's Building Code.

SECTION 3: The document entitled "1997 Southern Nevada Building Code Amendments," as previously adopted and modified by the City, is hereby repealed.

SECTION 4: If any section, subsection, subdivision, paragraph, sentence, clause or phrase in this ordinance or any part thereof is for any reason held to be unconstitutional or invalid or ineffective by any court of competent jurisdiction, such decision shall not affect the validity or effectiveness of the remaining portions of this ordinance or any part thereof. The City Council of the City of Las Vegas hereby declares that it would have passed each section, subsection, subdivision, paragraph, sentence, clause or phrase thereof irrespective of the fact that any one or more sections, subsections, subdivisions, paragraphs, sentences, clauses or phrases be declared unconstitutional, invalid or ineffective.

SECTION 5: Whenever in this ordinance any act is prohibited or is made or declared to be unlawful or an offense or a misdemeanor, or whenever in this ordinance the doing of any act is

required or the failure to do any act is made or declared to be unlawful or an offense or a misdemeanor, the doing of such prohibited act or the failure to do any such required act shall constitute a misdemeanor and upon conviction thereof, shall be punished by a fine of not more than $1,000.00 or by imprisonment for a term of not more than six months, or by any combination of such fine and imprisonment. Any day of any violation of this ordinance shall constitute a separate offense.

SECTION 6: All ordinances or parts of ordinances or sections, subsections, phrases, sentences, clauses or paragraphs contained in the Municipal Code of the City of Las Vegas, Nevada, 1983 Edition, in conflict herewith are hereby repealed.

PASSED, ADOPTED and APPROVED this 19 day of November, 2003.

APPROVED:

By _____
OSCAR B. GOODMAN, Mayor

ATTEST:

_____
BARBARA JO RONEMUS, City Clerk

APPROVED AS TO FORM:

Val Steed 10-1-03
Date

The above and foregoing ordinance was first proposed and read by title to the City Council on the 29th day of October, 2003, and referred to a committee for recommendation; thereafter the committee reported favorably on said ordinance on the 19th day of November, 2003, which was a regular meeting of said Council; that at said regular meeting, the proposed ordinance was read by title to the City Council as first read and adopted by the following vote:

VOTING "AYE": Mayor Goodman, Councilmembers Reese, Brown, L. B. McDonald, Weekly, Mack and Moncrief

VOTING "NAY": None

EXCUSED: None

ABSTAINED: None

APPROVED:

OSCAR B. GOODMAN, Mayor

ATTEST:

BARBARA JO RONEMUS, City Clerk

CITY OF LAS VEGAS

AMENDMENTS TO
2003 INTERNATIONAL BUILDING CODE

PREFACE

This document comprises the Amendments to the 2003 International Building Code as published by the International Code Council. The Amendments were developed by the City of Las Vegas to be adopted by reference. These Amendments are not to be considered part of a local government's building code unless they have been adopted by that local government. These Amendments are not intended to prevent the use of any material or method of construction not specifically prescribed herein, provided any alternate has been approved and its use authorized by the building official. This document is available to be adopted by any jurisdiction without permission or approval from the City of Las Vegas.

TABLE OF CONTENTS

NOTE: This Table of Contents is included for the sake of convenience, but is not officially part of the adopted Amendments. Efforts have been made to ensure completeness and accuracy of the Table of Contents, but its completeness and accuracy cannot be guaranteed.

Preface

City of Las Vegas Amendments to the 2003 International Building Code

CHAPTER 1 ADMINISTRATION

Chapter 1 is deleted in its entirety and replaced with a new Chapter 1 to read as follows:

CHAPTER 1 ADMINISTRATION

SECTION 101 GENERAL

101.1 Title and Scope. These regulations shall be a part of, and may be referred to as the Building Code, as adopted by the City of Las Vegas (hereinafter referred to as "this code"). The provisions of this code shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures.

Exception: Dwellings that are subject to the 2003 International Residential Code, as adopted by the City.

Unless any such code has been specifically adopted by the City, any reference to an I-Code (international code), including without limitation the following, shall be deemed to refer to the equivalent code, if any, that has been adopted by the City:

ICC Electrical Code
International Energy Conservation Code
International Existing Building Code
International Fire Code
International Fuel Gas Code
International Mechanical Code
ICC Performance Code
International Plumbing Code
International Private Sewer Disposal Code
International Administrative Code
International Urban-Wildland Interface Code
International Zoning Code

Equivalent adopted versions include the:

2002 National Electrical Code
1992 Model Energy Code
2003 NFPA 1 Fire Code
2000 Uniform Mechanical Code
2000 Uniform Plumbing Code
1997 Uniform Administrative Code

(end of New Chapter 1)

302.1.1 Incidental Use Areas

Table 302.1.1 is amended to delete Footnote (a) without replacement.

303.1 Assembly Group A

Subsection 303.1 is amended to add to Assembly Group A-2 the following occupancy, together with its accompanying note:

Casinos

Note: A casino is a gaming establishment where the primary use is gaming and is not classified as a Group B or Group M Occupancy.

304.1 Business Group B

Subsection 304.1 is amended to add to Business Group B the following occupancy, together with its accompanying note:

Outpatient clinic and medical offices

Note: Includes locations where five or fewer patients in a tenant space are not capable of self-preservation.

308.3 Group I-2

Subsection 308.3 is deleted in its entirety and replaced with a new Subsection 308.3 to read as follows:

308.3 Group I-2. This occupancy shall include buildings and structures used for medical, surgical, psychiatric, nursing or custodial care of more than five persons who are not capable of self-preservation. This group shall include, but not be limited to the following: Hospitals, nursing homes (both intermediate care facilities and skilled nursing facilities), mental hospitals, and detoxification facilities. A residential facility such as the above with five or fewer persons shall be classified as Group R-3. A medical treatment or health care facility such as the above with five or fewer persons shall be classified as Group B.

311.2 Moderate-hazard storage, Group S-1

Subsection 311.2 is amended to add one item to read as follows:

Mini-storage facilities

403.1 Applicability

Subsection 403.1 is amended so that the first sentence thereof reads as follows:

403.1 Applicability. The provisions of this section shall apply to all buildings having occupied floors located more than 55 feet (16764 mm) above the lowest level of fire department vehicle access.

403.13 Smokeproof exit enclosures

Subsection 403.13 is amended to read as follows:

403.13 Smokeproof exit enclosures. Every required stairway in buildings having a floor level more than 55 feet (16764 mm) above the lowest level of fire department vehicle access shall comply with Subsections 909.20 and 1019.1.8.

403.15 Smoke control

A new Subsection 403.15 is added to read as follows:

403.15 Smoke control. A smoke control system meeting the requirements of Section 909 shall be provided.

404.3 Automatic sprinkler protection

Subsection 403.3 is amended to delete Exceptions 1 and 2, and to add a new exception to read as follows:

Exception: Where the ceiling of the atrium is more than 55 feet (16764 mm) above the floor, the installation of sprinkler protection at the ceiling of the atrium is not required if the elimination of that requirement is specifically approved by the building official.

406.4.2 Ventilation

Subsection 406.4.2 is amended to read as follows:

406.4.2 Ventilation. A mechanical ventilation system shall be provided that is capable of exhausting a minimum of 1.5 cubic feet per minute (cfm) per square foot (0.71 L/s/m^2) of gross floor area. The building official may approve an alternate ventilation system designed to exhaust a minimum of 14,000 cfm (6608 L/s) for each operating vehicle. Such system shall be based on the anticipated instantaneous movement rate of vehicles, but not less than 2.5 percent of the garage capacity (or one vehicle). Automatic carbon monoxide sensing devices may be employed to modulate the ventilation system to maintain a maximum average concentration of carbon monoxide of 50 parts per million during any 8-hour period, with a maximum concentration not greater than 200 parts per million for a period not exceeding one hour. Connecting offices, waiting rooms, ticket booths and similar uses shall be supplied with conditioned air under positive pressure.

406.6.3 Ventilation

Subsection 406.6.3 is amended to read as follows:

406.6.3 Ventilation. A mechanical ventilation system shall be provided that is capable of exhausting a minimum of 1 cubic foot per minute (cfm) per square foot (0.044 L/s/m^2) of floor area. Each engine repair stall shall be equipped with an exhaust pipe extension duct, extending to the outside of the building, which, if over 10 feet (3048 mm) in length, shall mechanically exhaust 300 cubic feet per minute (141.6 L/s). Connecting offices, waiting rooms, ticket booths and similar uses shall be supplied with conditioned air under positive pressure.

Exception: In repair garages where there is no open flame and welding being performed within the building, the mechanical ventilation system required may be omitted when, in the opinion of the building official, the building is equipped with unobstructed openings to the outer air that are sufficient to provide the necessary ventilation.

420 Professional office conversions

A new Section 420 and a new Subsection 420.1 are added to read as follows:

SECTION 420 PROFESSIONAL OFFICE CONVERSIONS

420.1 Professional office conversion. A professional office building with an area of 1500 square feet or less which is converted from a residential occupancy pursuant to a valid zoning approval and whose conversion involves only minor interior remodeling as allowed by the building official without expansion of the existing building is exempt from the requirements for commercial buildings (other than those contained in Chapter 34 of this Code). All conversions larger than 1500 square feet shall conform to the new construction requirements for a B Occupancy.

501.2 Premises identification

Subsection 501.2 is deleted and replaced with a new Subsection 501.2 to read as follows:

501.2 Premises identification. Approved numbers or addresses shall be provided for new buildings in accordance with City Ordinance No. 3744, Chapter 13.28 of the Las Vegas Municipal Code, and the regulations adopted thereunder.

502.1 Definitions

Subsection 502.1 is amended to delete the definition for "Height, Building" and replace it with a new definition to read as follows:

HEIGHT, BUILDING. The vertical distance above a reference datum measured to the highest point of the coping of a flat roof or to the deck line of a mansard roof or to the average height of the highest gable of a pitched or hipped roof. The reference datum shall be selected by whichever of the following yields the greater height:

1. The elevation of the highest adjoining sidewalk or ground surface within a 5-foot (1245 mm) horizontal distance of the exterior wall of the building when such sidewalk or ground surface is not more than 10 feet (3048 mm) above lowest grade; or

2. An elevation 10 feet (3048 mm) higher than the lowest grade when the sidewalk or ground surface described in Item 1 is more than 10 feet (3048 mm) above lowest grade.

The height of a stepped or terraced building is the maximum height of any segment of the building.

507.10 Non-combustible carports

A new Subsection 507.10 is added to read as follows:

507.10 Non-combustible carports. Non-combustible carports, open on all sides, not over 12 feet (3658 mm) in height, and located a minimum of ten feet (3048 mm) from any building or property line, may be of unlimited area.

602.6 Small structures

A new Subsection 602.6 is added to read as follows:

602.6 Small structures. Small insignificant structures used for parking lot offices, used car lot offices, shoe shine stands and similar uses can be of Type V-B construction provided that the structures do not exceed 500 square feet (46.5 m^2) in area, and are not of a temporary nature, and are separated from other structures a distance to be determined by the building official. The provision for area increases under Section 506 shall not apply to such structures. Vehicles or truck trailers shall not be considered as meeting the requirements of this subsection and shall not be permitted under its terms.

602.7 Combustible decorative materials and architectural features

602.7 Combustible decorative materials and architectural features. Architectural features of buildings, building components, and decorative structures shall comply with the provisions of this code. Combustible decorative materials and architectural furnishings used in Group A and public areas of Group R, Division 1 occupancies, shall comply with the Fire Code, as adopted by the City.

704.2.1 Type I and II construction

Subsection 704.2.1 is deleted in its entirety and replaced with a new Subsection 704.2.1 to read as follows:

704.2.1 Type I and II construction. Projections from walls of Type I or II construction shall be of noncombustible materials.

707.14.1 Elevator lobby

Subsection 707.14.1 is amended to delete Exceptions 3 and 4 in their entirety and replace them with Exceptions 3 and 4 to read as follows:

3. In buildings not classified as high-rise by Section 403, where additional doors are provided in accordance with Subsection 3002.6. Such doors shall be tested in accordance with UL 1784 without an artificial bottom seal.

4. In other than Group I occupancies, and in buildings not classified as high-rise by Section 403, lobby separation is not required where the building, including the lobby and corridors leading to the lobby, is protected by an automatic sprinkler system installed throughout in accordance with Subsection 903.3.1.1 or 903.3.1.2.

716.5.2 Fire barriers

Subsection 716.5.2 is amended to delete Exception 2 in its entirety without replacement.

903.1 General

A new Subsection 903.1.2 is added to read as follows:

903.1.2 Residential systems. Unless specifically allowed by this code, residential sprinkler systems installed in accordance with NFPA 13D or NFPA 13R shall not be recognized for the purposes of exceptions or reductions permitted by other provisions of this code.

A new Subsection 903.1.3 is added to read as follows:

903.1.3 Extent of protection. If any fire area in a building or structure is provided with fire sprinklers, whether required or not, all fire areas in the building or structure shall be provided with fire sprinklers.

Exceptions:

1. If a fire area is separated from other fire areas by a listed four-hour rated firewall with no openings.
2. Special hazard areas may be fire sprinklered without requiring additional fire sprinklers, when approved by the building official and fire marshal.

903.2 Where required

Subsection 903.2 is amended to delete the Exception in its entirety without replacement.

903.2.1.2 Group A-2

Subsection 903.2.1.2 is amended to delete Item 2 and replace it with a new Item 2 and its exception to read as follows:

2. The fire area has an occupant load of 100 or more.

   Exception: For existing buildings or portions thereof where no work is being done to the Group A occupancy.

903.2.5 Group I

Subsection 903.2.5 is amended to delete the Exception without replacement.

903.2.8 Group S-1

A new Subsection 903.2.8.3 is added to read as follows:

903.2.8.3 Mini Storage Facilities. An automatic sprinkler system shall be provided throughout all buildings used as a mini storage where the fire area exceeds 2,500 square feet (279 m^2) and is not separated by firewalls constructed in accordance with Section 705.

903.3.5.2 Secondary water supply

Subsection 903.3.5.2 is deleted in its entirety and replaced with a new Subsection 903.3.5.2 to read as follows:

903.3.5.2 Secondary water supply. For high-rise buildings, a secondary on-site water supply shall be provided. The secondary on-site water supply shall, at a minimum, be the greater of 15,000 gallons storage or in an amount equal to the hydraulically most demanding sprinkler system plus 100 gallons per minute (378.5 L/m) additional of the total standpipe-system. The secondary water supply shall have a duration not less than 30 minutes.

907.2.12 High-rise buildings

Subsection 907.2.12 is amended, along with all its exceptions, and replaced with a new Subsection 907.2.12 to read as follows:

907.2.12 High-rise buildings. Buildings having floors used for human occupancy located more than 55 feet (16764 mm) above the lowest level of fire department vehicle access shall be provided with an automatic fire alarm system and an emergency voice/alarm communications system in accordance with Subsection 907.2.12.2.

Exceptions:
1. Airport traffic control towers in accordance with Section 412.
2. Open parking garages in accordance with Subsection 406.3.
3. Unenclosed occupancies within Group A-5.
4. Low-hazard special occupancies in accordance with Subsection 503.1.2.

909.4.4 HVAC systems

Subsection 909.4.4 is amended to read as follows:

909.4.4 Air-handling systems. The design shall consider the effects of all airhandling components including, but not limited to: kitchen exhaust systems and the heating, ventilating and air-conditioning (HVAC) systems on both smoke and fire transport. The analysis shall include all permutations of systems status. The design shall consider the effects of the fire on the air-handling system.

909.12 Detection and control systems

Subsection 909.12 is amended to delete in their entirety both paragraphs that appear before Subsection 909.12.1 and replace them with the following two paragraphs:

909.12 Detection and control systems. Fire detection systems providing control input or output signals to mechanical smoke control systems or elements thereof shall comply with the requirements of Chapter 9, the Fire Code and NFPA 72. Such systems shall be equipped with a control unit complying with UL 864 and listed as smoke control equipment.

Control systems for mechanical smoke control systems shall include provisions for verification. Verification shall include positive confirmation of actuation, testing, manual override, and the presence

of power downstream of all disconnects. Smoke control systems shall be periodically tested as required by the Fire Code.

909.20.4 Mechanical ventilation alternative

Subsections 909.20.4 through 909.20.4.4 are deleted without replacement.

909.20.5 Stair pressurization alternative

Subsection 909.20.5 is deleted in its entirety and replaced with a new Subsection 909.20.5 and additional Subsections 909.20.5.1 through 909.20.5.3 to read as follows:

909.20.5 Stair pressurization alternative. The provisions of Subsections 909.20.5.1 through 909.20.5.3 shall apply to the smoke proof enclosures using stair pressurization.

909.20.5.1 Pressure difference. The stair enclosure shall be pressurized to a minimum of 0.05 inch of water gage relative to the vestibule with all stairway doors closed under the maximum anticipated stack pressures. The vestibule with doors closed shall have a minimum of 0.05 inch of water gage (12.44 Pa) positive pressure relative to the fire floor. The pressure difference across doors shall not exceed 30 lbs (133-N) maximum force to begin opening the door.

909.20.5.2 Vestibule doors. The door assembly from the building into the vestibule shall be a fire door complying with Subsection 714.2 and provided with gaskets or other provisions to minimize air leakage. The door assembly from the vestibule to the stairway shall have not less than a 20-minute fire protection rating complying with Subsection 714.2.

909.20.5.3 Dampered relief opening. A controlled relief opening capable of discharge a minimum of 2,500 cfm (1180 L/s) of air at the design pressure difference shall be located at the top of pressurized exit enclosures.

909.21 Underground buildings

Subsection 909.21, together with Subsections 909.21.1 through 909.21.3, are deleted and replaced with a new Subsection 909.21 to read as follows:

909.21 Underground building smoke exhaust system. Where required in accordance with Subsection 405.5 for underground buildings, an approved smoke control or smoke exhaust system shall be provided. The design analysis shall comply with Subsection 909.4.

910.3.1.2 Sprinklered buildings

Subsection 910.3.1.2 is amended to read as follows:

910.3.1.2 Sprinklered buildings. Where installed in buildings protected with an approved automatic sprinkler system, smoke and heat vents shall operate automatically by actuation of a heat-responsive device rated at a minimum of 350° F (177° C). Smoke and heat vents shall also be designed for manual operation.

Table 910.3 Requirements for draft curtains and smoke and heat vents

Table 910.3 is amended to read as follows, with no changes to the footnotes.

TABLE 910.3
REQUIREMENTS FOR DRAFT CURTAINS AND SMOKE AND HEAT VENTS[a]

Occupancy Group and Commodity Classification	Designated Storage Height (feet)	NON-SPRINKLERED					SPRINKLERED			
		Minimum Curtain Board Depth (feet)	Maximum Area Formed by Curtain Boards (feet)	Vent Area to Floor Area Ratio	Maximum Spacing of Vent Centers (feet)	Maximum Distance to Vents from Wall or Curtain Boards[b] (feet)	Draft Curtains	Vent Area to Floor Area Ratio	Maximum Spacing of Vent Centers (feet)	Maximum Distance to Vents from Wall (feet)
Group F-1	-	0.2 xH but ≥ 4	50,000	1:100	120	60	Not Permitted	1:100	100	50
Group S-1 I-IV (Option 1)	≤ 20	6	10,000	1:100	100	60				
	> 20 ≤ 40	6	8,000	1:75	100	55				
Group S-1 I-IV (Option 2)	≤ 20	4	3,000	1:75	100	55				
	>20 ≤ 40	4	3,000	1:50	100	50				
Group S-1 High Hazard (Option 1)	≤ 20	6	6,000	1:50	100	50				
	> 20 ≤ 30	6	6,000	1:40	90	45				
Group S-1 High Hazard (Option 1)	≤ 20	4	4,000	1:50	100	50				
	> 20 ≤ 30	4	2,000	1:30	75	40				

TABLE 1004.1.2 MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT

Table 1004.1.2 is amended to add a new occupancy type as follows:

OCCUPANCY	FLOOR AREA IN SQ. FT. PER OCCUPANT
Showroom	
Food provided	12 net
Beverage only provided	10 net

TABLE 1005.1 EGRESS WIDTH PER OCCUPANT SERVED

Table 1005.1 and its footnote are deleted and replaced with a new Table 1005.1 to read as follows:

OCCUPANCY	Stairways (inches per occupant)	Other egress components (inches per occupant)
Occupancies other than listed below	0.3	0.2
Hazardous: H-1, H-2, H-3 and H-4	0.7	0.4
Institutional: I-2	N/A	N/A

For SI: 1 inch = 25.4 mm. N/A = Not applicable.

1008.1.8.6 Delayed egress locks

Subsection 1008.1.8.6 is amended to add an exception after the first paragraph, but before Items 1 through 6, to read as follows:

Exception: Daycare facilities, as permitted by approval of the building official.

1011.6 Floor-level exit signs

A new Subsection 1011.6 is added to read as follows:

1011.6 Floor-level exit signs. Where exit signs are required by Subsection 1011.1, additional approved low-level exit signs that are internally or externally illuminated shall be provided in all corridors serving guest rooms in Group R, Division 1 Occupancies. The bottom of each such sign shall not be less than 6 inches (152 mm) nor more than 8 inches (203 mm) above the floor level and shall indicate the path of exit travel. For exit and exit-access doors, the sign shall be on the door or adjacent to the door, with the closest edge of the sign within 4 inches (102 mm) of the doorframe.

1019.1.8 Smokeproof enclosures

Subsection 1019.1.8 is amended to read as follows:

1019.1.8 Smokeproof enclosures. In buildings required to comply with Section 403 or 405, each of the exits of a building that serves stories where the floor surface is located more than 55 feet (16764 mm) above the lowest level of fire department vehicle access or more than 30 feet (9144 mm) below the level of exit discharge serving such floor levels shall be a smokeproof enclosure or a pressurized stairway in accordance with Subsection 909.20.

1024.6.2.1 Smoke control

Subsection 1024.6.2.1 is amended to read as follows:

1024.6.2.1 Smoke control. Means of egress serving a smoke-protected assembly seating area shall be provided with a smoke control system complying with Section 909 or natural ventilation designed to maintain the smoke level at least 10 feet (3048 mm) above the floor of the means of egress.

1025.1 General

Subsection 1025.1 is amended to delete all exceptions and replace them with new exceptions to read as follows:

Exceptions:

1. The emergency escape and rescue opening is permitted to open onto a balcony within an atrium in accordance with the requirements of Section 404, provided the balcony provides access to an exit and the dwelling unit or sleeping room has a means of egress that is not open to the atrium.
2. High-rise buildings in accordance with Section 403.
3. Emergency escape and rescue openings are not required from basements or sleeping rooms which have an exit door that opens directly into a public street, public alley, yard or egress court.

4. Basements without habitable spaces and having no more than 200 square feet (18.6 m^2) in floor area shall not be required to have emergency escape windows.
5. Media rooms located in Group R-3.

1203.1 General

Subsection 1203.1 is deleted and replaced with a new Subsection 1203.1, along with additional Subsections 1203.1.2 and 1203.1.2.1 through 1203.1.4.2, to read as follows:

1203.1 General. Buildings shall be provided with natural ventilation or mechanical ventilation and shall comply with the requirements of Subsections 1203.1.2 through 1203.1.4 below.

1203.1.2 Ventilation for R occupancies. Guest rooms and habitable rooms within a dwelling unit or congregate residence shall be provided with natural ventilation by means of openable exterior openings with an area of not less than 1/20th of the floor area of such rooms with a minimum of 5 square feet (0.46 m^2).

1203.1.2.1 Bathrooms, etc. Bathrooms, water closet compartments, laundry rooms and similar rooms in R-1, R-2 occupancies, when provided with natural ventilation by means of operable exterior openings, shall have a minimum of 1-1/2 square feet (0.14 m^2).

1203.1.2.2 Toilet rooms. Toilet rooms shall be provided with a fully openable exterior window at least 3 square feet (0.27 m^2) in area; a vertical duct not less than 100 square inches (0.064516 m^2) in area for the first toilet facility, with 50 additional square inches (0.032 m^2) for each additional facility; or a mechanically operated exhaust system capable of exhausting 50 cubic feet of air per minute (23.6L/x) for each water closet or urinal installed in the toilet room. Such systems shall be connected directly to the outside, and the point of discharge shall be at least 3 feet (914 mm) from any openable window.

1203.1.3 Mechanical ventilation. Mechanically operated ventilation systems shall be in accordance Subsections 1203.1.3.1 through 1203.1.3.4 that follow.

1203.1.3.1 General. All enclosed portions of Groups A, B, E, F, H, I, M, and S occupancies customarily occupied by human beings shall be provided with natural ventilation by means of openable exterior openings with an area not less than 1/20th of the total floor area or shall be provided with a mechanically operated ventilation system. Such exterior openings shall open directly onto a public way or a yard or court as set forth in Subsection 1203.4. Such mechanically operated ventilation system shall be capable of supplying a minimum of 15 cubic feet per minute (7 L/s) of outside air per occupant in all portions of the building during such time as the building is occupied. If the velocity of the air at the register exceeds 10 feet per second (3 m/s), the register shall be placed more than 8 feet (2438 mm) above the floor directly beneath.

Toilet rooms shall be provided with a fully openable exterior window at least 3 square feet (0.27 m^2) in area; a vertical duct not less than 100 square inches (0.064 m^2) in area for the first toilet facility, with 50 additional square inches (0.032 m^2) for each additional facility; or a mechanically operated exhaust system capable of exhausting 50 cubic feet of air per minute (23.6L/x) for each water closet or urinal installed in the toilet room. Such systems shall be connected directly to the outside, and the point of discharge shall be at least 3 feet (914 mm) from

any openable window.

1203.1.3.2 Groups B, F, M, and S occupancies. In all buildings classified as Groups B, F, M, and S Occupancies or portions thereof where Class I, II or II-A liquids are used, a mechanically operated exhaust ventilation system shall be provided sufficient to produce six air changes per hour. Such exhaust ventilation shall be taken from a point at or near the floor level.

1203.1.3.3 Group H occupancies. Rooms, areas or spaces of Group H Occupancies in which explosive, corrosive, combustible, flammable or highly toxic dusts, mist, fumes, vapors or gases are or may be emitted due to the processing, use, handling or storage of materials shall be mechanically ventilated as required by the Fire Code and the Mechanical Code, and Subsection 414.3 of this code.

1203.1.3.4 Group R occupancies. In Group R occupancies, in lieu of required exterior openings for natural ventilation, a mechanical ventilating system may be provided. Such system shall be capable of providing two air changes per hour in guest rooms, dormitories, habitable rooms and in public corridors with a minimum of 15 cubic feet per minute (7 L/s) of outside air per occupant during such time as the building is occupied.

In lieu of required exterior openings for natural ventilation in bathrooms containing a bathtub, shower or combination thereof, laundry rooms, and similar room, a mechanical ventilation system connected directly to the outside capable of providing five air changes per hour shall be provided. Such systems shall be connected directly outside, and the point of discharge shall be at least 3 feet (914 mm) from any opening that allows air entry into occupied portions of the building. Bathrooms that contain only a water closet, lavatory or combination thereof and similar rooms may be ventilated with an approved mechanical recirculating fan or similar device designed to remove odors from the air.

1203.1.4.1 Repair garage. Ventilation in the repair garage shall be in accordance with Subsection 406.6.3, as amended and adopted by the City.

1203.1.4.2 Enclosed parking garages. Ventilation in the enclosed parking garage shall be in accordance with Subsection 406.4.2, as amended and adopted by the City.

1203.4 Natural ventilation

Subsection 1203.4 and its subparts (Subsections 1203.4.1 through 1203.4.3) are deleted in their entirety.

1203.5 Other ventilation and exhaust systems

Subsection 1203.5 is deleted in its entirety.

1205.2.1 Adjoining spaces

A new Subsection 1205.2.1.1 is added, following the exception to Subsection 1205.2.1, to read as follows:

1205.2.1.1 Common wall openings. The common wall opening may be glazed with a transparent or translucent fenestration product.

1301.1.1 Criteria

Subsection 1301.1.1 is amended to read as follows:

1301.1.1 Criteria. Buildings shall be designed and constructed in accordance with the CABO 1992 Model Energy Code, and the Supplemental Document with amendments thereto, as adopted by Chapter 16.52 of the Las Vegas Municipal Code.

1503.4 Roof drainage

Two new Subsections 1503.4.2 and 1503.4.3 are added to read as follows:

1503.4.2 Roof drainage. Roof drainage water from a building shall not be allowed to drain to adjacent properties and shall not be allowed to accumulate adjacent to any building.

1503.4.3 Overflow drains and scuppers. Overflow scuppers having three times the size of the roof drains and having a minimum opening height of 4 inches (102 mm) may be installed in the adjacent parapet walls with the inlet flow line located 2 inches (51 mm) above the low point of the adjacent roof. If a scupper is used as a combination primary and overflow roof drain, it shall be four times the size of the primary roof drain.

Table 1607.1 MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS AND MINIMUM CONCENTRATED LIVE LOADS

Table 1607.1, Item 27 is amended to add another occupancy or use below "Residential, one- and-two-family dwellings" to read as follows:

OCCUPANCY OR USE	UNIFORM (psf)	CONCENTRATED (lbs.)
Habitable attics and sleeping areas	40	----

1607.2 Loads not specified

Subsection 1607.2 is amended to add a second paragraph to read as follows:

Where it can be determined in designing floors that the actual live load will be greater than the value shown in Table 1607.1, the actual live load shall be used in the design of such buildings or portions thereof. Special provisions shall be made for machine and apparatus loads.

1607.9.2 Alternate floor live load reduction

Subsection 1607.9.2 is amended to change the definition of A (area) for purposes of Equation 16-22 to read as follows:

A = Area of floor supported by the member, square feet (m^2).

1612.3 Establishment of flood hazard areas

Subsection 1612.3 is amended to read as follows:

1612.3 Establishment of flood hazard areas. To establish flood hazard areas, the governing body shall adopt a flood hazard map and supporting data. The flood hazard map shall include, at a minimum, areas of special flood hazard as identified by the Federal Emergency Management Agency in an engineering report entitled "The Flood Insurance Study for Clark County, Nevada, and Incorporated Areas," dated August 16, 1995, as amended or revised with the accompanying Flood Insurance Rate Map (FIRM) and Flood Boundary and Floodway Map (FBFM) and related supporting data along with any revisions thereto. The adopted flood hazard map and supporting data are hereby adopted by reference and declared to be part of this section.

1614.1 Scope

Subsection 1614.1 is amended to add a new paragraph to Exception 1 to read as follows:

Subsection 1617.4 shall be used for equivalent lateral force procedure, and Subsection 1617.5 shall be used for simplified analysis procedure for seismic design of buildings.

1617.6.1.1 ASCE 7, Table 9.5.2.2

Subsection 1617.6.1.1 is amended to add an Item 5 to read as follows:

5. The Table 1617.6.2 entry for cantilevered column systems (Item 7A) shall apply.

1704.4 Concrete construction

Subsection 1704.4 and its Exception are amended to read as follows:

1704.4 Concrete construction. The special inspections and verifications for concrete construction shall be as required by this section and Table 1704.4.

Exception: Special Inspections shall not be required for:

1. Isolated spread or continuous concrete footings supporting walls of buildings three stories or less in height that are fully supported on earth or rock where:
   1.1. The footings are designed in accordance with Table 1805.4.2; or
   1.2. The structural design is based on a f'c no greater than 2500 pounds per square inch (17.2 Mpa).
2. Nonstructural concrete slabs supported directly on the ground, including prestressed slabs on grade where the effective prestress in the concrete is less than 150 pounds per square inch (1.03 Mpa).
3. Concrete patios, driveways and sidewalks on grade.

1704.5 Masonry construction

Subsection 1704.5 is amended so that Item 2 of the Exception reads as follows:

2. Masonry fence or retaining walls less than 8'-0" in height or combined masonry fence and retaining walls less than 16'-0" in height, with the retaining wall portion less than 8'-0" in height. Wall height shall be measured from top of footing to top of wall. Walls shall be designed in accordance with Chapter 2 of ACI 530/ASCE 5/TMS 402 with allowable stresses for masonry reduced by one half.

1704.7 Soils

Subsection 1704.7 is amended so that its first paragraph (before the Exception) reads as follows:

The special inspections for existing site soil conditions, fill placement and load-bearing requirements shall follow Subsections 1704.7.1 through 1704.7.4.

A new Subsection 1704.7.4 is added to read as follows:

1704.7.4 Excavation. When required by the registered design professional or the building official, the special inspector shall verify that the exposed soils at the completion of the foundation excavation are in compliance with the recommendations of the approved soils report.

A new Subsection 1704.15 is added to read as follows:

1704.15 Amusement and transportation rides. Special inspection and testing are required during installation, construction, modification, repair, operational testing, and when required by the building official and manufacturer.

1802.1 General

Subsection 1802.1 is amended to add a new paragraph at the end to read as follows:

All projects that are exempted from the requirement for a geotechnical report under Subsection 1802.2 shall comply with Tables 1804.2 and 1904.3. Design values based on a Class 5 material and a severe sulfate exposure level shall be selected as default values.

1802.2 Where required

Subsection 1802.2 and its Exception are amended to read as follows:

1802.2 Where required. The owner or applicant shall submit a foundation and soils investigation (geotechnical report) to the building official where required in Subsections 1802.2.1 through 1802.2.7. Geotechnical reports shall be prepared by a registered design professional. Recommendations included in the report and approved by the building official shall be incorporated in the construction documents. Geotechnical reports shall be required for all projects that require new foundations.

Exception. At the option of the building official, the following projects may be exempted from submitting a geotechnical report:

1. Habitable remodels or additions to a dwelling unit with a footprint less than 600 square feet.
2. Storage, garage, agricultural, and similar use buildings, such as gazebos and playhouses, associated with a dwelling unit with a footprint less than 600 square feet.
3. Single story commercial structures less than 600 square feet.

4. Fences.
5. Manufactured homes, trailers, modular buildings, and pre-engineered carports.
6. Signs less than 50 feet in height.

1802.2.3 Ground-water table

Subsection 1802.2.3 is amended to delete its Exception without replacement.

1802.3.2 Expansive soils

Subsection 1802.3.2 is amended to add a new paragraph after Item 4 to read as follows:

Soils may be determined to be expansive or non-expansive by the preceding methods or the standard 60 pounds per square foot swell test. When the standard 60 pounds per square foot swell test is performed on any soil with a swell greater than 4 percent, it shall be considered expansive. When soils are determined to be expansive, special design consideration is required. In the event that expansive soil properties vary with depth, the variation shall be included in the engineering analysis of the expansive soil effect on the structure. The foundation design and special inspection for grading/foundations shall be based upon results obtained from the standard 60 pounds per square foot swell test. Refer to Subsection 1805.8 and Table 1805.8 for additional requirements.

1802.3 Soil classification

Subsection 1802.3 is amended to add a new Subsection 1802.3.3 to read as follows:

1802.3.3 Standard 60 pounds per square foot swell test. The swell test samples may be remolded to the in-place density required for the particular soil type as called for in the geotechnical report, or it may be an in situ undisturbed sample. The test samples shall be one inch thick and laterally confined by placing them in a retaining ring constructed in accordance with ASTM D-235. The swell test sample shall be oven dried at 60° C, and the sample shall be dried a minimum of eight (8) hours. The test sample shall be inundated with water and kept in a standard moisture condition until measurable swelling or vertical movement ceases. The swell test shall use a 60 pounds per square foot surcharge load. The balance of the swell test will be per ASTM D-2435. Swell test results shall be interpreted using Table 1805.8 or as permitted in Subsection 1805.8.

1802.4 Investigation

Subsection 1802.4 is amended to add a new Subsection 1802.4.2 to read as follows:

1802.4.2 Minimum exploration requirements. The minimum exploration requirements are as follows:

1. For areas less than or equal to one acre, a minimum of two explorations.
2. For areas greater than one acre, but less than five acres, a minimum of one exploration for the first acre and one for each additional two acres, or portion thereof.
3. For areas greater than or equal to five acres, but less than twenty acres, a minimum of three explorations plus one additional exploration for each three acres above five.
4. For areas greater than or equal to twenty acres, a minimum of eight explorations plus one additional exploration for each five acres or fraction thereof above twenty.

5. Building additions of less than 2,000 square feet shall require a minimum of one exploration.
6. For signs, towers, and monopoles whose locations are known and only that area of the site is to be developed, a minimum of one exploration at the location is required.
7. The minimum depth of the exploration shall be ten feet. Exploration depth shall be increased as necessary to evaluate the suitability of the material within the foundation's depth of influence as determined by the registered design professional. Should refusal be encountered the exploration can be terminated. However, at least three-fourths of the required explorations shall be to the minimum depth. The geotechnical report shall clearly state the criteria used to determine that refusal was met. When information regarding the final grades is made available, the registered design professional shall determine if the explorations originally documented in the geotechnical report meet the depth requirements.

1802.6 Reports

Subsection 1802.6 is deleted in its entirety and replaced with a new Subsection 1802.6 to read as follows:

1802.6 Reports. The soil classification and design load-bearing capacity shall be shown on the construction document. Where required by the building official, a written report of the investigation shall be submitted that shall include, but need not be limited to, the following information:

1. A plot showing the location of test borings and excavations. The plot shall be dimensioned and shall show the approximate location of all existing structures.
2. A complete record of the soil samples.
3. A record of the soil profile.
4. Depth of the water table, if encountered.
5. Recommendations for foundation type and design criteria, including but not limited to: bearing capacity of natural or compacted soil; provisions to mitigate the effects of expansive soils; mitigation of the effects of liquefaction, differential settlement, and varying soil strength; and the effects of adjacent loads. Provide provisions to mitigate the effects of collapsible soils, soluble soils, uncontrolled fill, chemical heave, and corrosive soils.
6. Expected total and differential settlement.
7. Pile and pier foundation information in accordance with Subsection 1808.2.2.
8. Special design and construction provisions for footings or foundations founded on expansive soils, as necessary.
9. Compacted fill material properties and testing in accordance with Subsection 1803.5. Provide provisions to mitigate the effects of collapsible soils, soluble soils, uncontrolled fill, chemical heave, and corrosive soils.
10. Soil classification by the Unified Soil Classification System. Backup data on tests performed in the soil classification shall be included.
11. Address, if applicable the possible impacts on adjoining properties and mitigating measures to be undertaken.
12. Suitability of onsite soils for use as fill material.
13. Provide grading requirements for onsite and import soils (where applicable) including, but not limited to, swell, solubility, and sulfates.
14. Geotechnical design considerations for drainage structures, as applicable.
15. Trenching or other special procedures for determining fault and fissure(s) locations. The potential for differential movement across a fault and fissuring should be evaluated.
16. Procedures for mitigation for geological hazards.
17. Erosion control requirements, as applicable.

18. Anticipated structural loads and type of proposed structure.
19. Site class per Table 1615.1.1.

1803.5 Compacted fill material

Subsection 1803.5 is amended to add Item 8, before the Exception, to read as follows:

8. A placement procedure for oversized material. The procedure shall include the following elements at a minimum:

   8.1 No rock or similar irreducible material with a maximum dimension greater than 12 inches shall be buried or placed in fills within five feet, measured vertically, from the bottom of the footing or lowest finished floor elevation, whichever is lower, within the building pad.

   8.2 Oversized fill material shall be placed so as to assure the filling of all voids with well-graded soil. Specific placement and inspection criteria shall be stated in the soils report.

   8.3 Continuous special inspections will be required during the placement of any oversized fill material.

1805.1 General

Subsection 1805.1 is amended to add a new Subsection 1805.1.1 to read as follows:

1805.1.1 Minimum distances to ground faulting.

1. The minimum set back for an occupied structure from a Holocene active fault shall be fifty (50) feet. The minimum setback for an essential facility or an R3 occupancy shall not be less than five (5) feet to any Quaternary active fault. A Holocene active fault is a fault with recognized activity within Holocene time (within the past 11,000 years). A Quaternary active fault is a fault with a recognized activity within Quaternary time (within the past 1.6 million years).
2. When the geotechnical report establishes that neither a fault nor a fault zone exists on the project, no fault-zone setback requirements will be imposed.
3. If through exploration, the fault location is defined, the fault, the no-build zone, or both, shall be clearly shown to scale on the grading, plot plan(s), and final map.
4. When the fault location is not fully defined by explorations but a no-build zone of potential fault impact is established by the soils report, no portion of the foundation system shall be constructed within that zone. The no-build zone shall be clearly shown to scale on the grading, plot plan(s), and final map.
5. For single lot, single-family residences, the fault location may be approximated by historical research as indicated in the soils report. A no-build zone of at least fifty (50) feet each side of the historically approximated fault edge shall be established. A no-build zone shall be clearly shown to scale on the grading, plot plan(s), and final map.

1805.5.2 Foundation wall materials

Subsection 1805.5.2 is amended to add Item 6 to read as follows:

6. Horizontal reinforcement shall be evenly distributed throughout the height of the wall, and be not less than one-third for concrete and one-sixth for masonry of that required for the vertical reinforcement. In masonry walls, masonry joint reinforcement may be used to meet this requirement.

1805.5.5.2 Seismic requirements for masonry foundation walls

Subsection 1805.5.5.2 is amended so that Items 1 and 2 read as follows:

1. For Seismic Design Category A, no additional seismic requirements shall apply.
2. For Seismic Design Categories B and C, a design based upon Tables 1805.2(2) through 1805.5(4) shall be used, subject to the seismic requirements of Section 2106.

1805.8 Design for expansive soils

Subsection 1805.8 is amended to add a new Table 1805.8 to read as follows:

TABLE 1805.8
POST-TENSIONED SLAB CRITERIA

Expansion	Percent Swell Under 60 psf surcharge	Minimum Design Values Ym (inches) for PT slabs		Minimum thickened edge or footing depth (inches)
		Edge Lift	Center Lift	
Low	0 to < 4	1/8 to ¼	-----	12
Moderate	≥ 4 to < 8	¼ to ½	1/8 to 3/8	12
High	≥ 8 to < 12	½ to 1	3/8 to 1	18
Critical 12	≥ 12 to < 16	See Note No. 12		24
Critical 16	≥ 16 to < 20	See Note No. 12		30
Critical 20+	20 or greater	See Note No. 12		36

Notes:
1. This Table is intended to address expansive soil. The presence of collapsible soil or other geologic conditions may require different design criteria.
2. Foundations shall be designed to meet design criteria of the Post-Tensioning Institute manual "Design and Construction of Post-Tensioned Slabs-On-Ground, Second Edition." Both edge lift and center lift conditions need to be evaluated.
3. Edge moisture variation distance (Em) shall be a minimum of 2.5 feet for edge lift and 4.75 feet for center left.
4. C_A for prefabricated roof truss clear spans shall be 360 for center lift and 800 for edge lift.
5. Typical systems using stiffener beams may be equated to a flat slab of equivalent stiffness. Stiffening beams in post-tension designs shall be spaced no more than 15 feet apart or closer than 6 feet. Stiffener beam width shall not be less than 9 inches. Conventionally reinforced designs may also be used.
6. Modulus of elasticity of the soil (Es) shall be taken at 1000 psi unless tests indicate otherwise.
7. All concrete in the foundation system must be a minimum of 2500 psi and shall comply with Table

1904.3. Lean concrete shall not be permitted in slabs or beams.

8. The calculated differential deflection of the foundation slab shall not exceed the limitations of "Design and Construction of Post-Tensioned Slabs-on-Ground, Second Edition" nor ½ inch for edge lift.
9. Perimeter loading of slab (P) shall be limited to dead load.
10. Expansion (swell) test shall be performed in accordance with Subsection 1802.3.3.
11. Thickened edge embedment depth shall be measured from the top of the lowest adjacent final compacted subgrade to the bottom of the footing.
12. Specific recommendations from a geotechnical engineer are required. Design value (Ym) shall be a minimum of 1 inch if there is no specific recommendation from the geotechnical engineer.
13. Post-tensioned foundations constructed over stable soils, consisting primarily of sands and gravels, need not comply with Subsection 1805.8.

1805.8.2 Slab-on-ground foundations.

Subsection 1805.8.2 is amended to add a new paragraph before the exception, to read as follows:

The criteria for determining the expansive nature of soils are given in Subsection 1802.3.2. The minimum design criteria for post-tensioned slabs are defined in Table 1805.8.2. Where conventional slabs and foundations are used on expansive soils, the footing depth shall be equal to or greater than the thickened edge depth listed in Table 1805.8.2.

1910.4.3.1 Walls

Subsection 1910.4.3.1 is amended to delete the Exception in its entirety without replacement.

1911.2 Post-tension slab-on-ground provisions

A new Subsection 1911.2 is added to read as follows:

1911.2 Post-tension slab-on-ground provisions. Where post-tension slabs-on-ground are utilized, design shall be in accordance with PTI Design and Construction of Post-Tensioned Slabs-On-Ground. The design for expansive soils is specified in Subsection 1805.8.

2107.2 Modifications to ACI 530/ASCE 5/TMS 402

Subsection 2107.2 is amended to add three new Subsections 2107.2.7, 2107.2.8, and 2107.2.9 to read as follows:

2107.2.7 ACI 530/ASCE 5/TMS 402, Section 1.4, standards cited in this code. Modify ASCE 7-98 to ASCE 7-02.

2107.2.8 ACI 530/ASCE 5/TMS 402, Section 2.3.3.2.3. The design of walls with an h/t ratio larger than 30 shall be based on forces and moments determined from an analysis of the structure. Such analysis shall consider the influence of axial loads and variable moment of inertia on member stiffness and fixed-end moments, effect of deflections on moments and forces and the effects of duration of loads.

2107.2.9 ACI 530/ASCE 5/TMS 402, Section 2.3.6, Design assumptions. The working stress design procedure is based on working stresses and linear stress-strain distribution assumptions with all stresses

in the elastic range as follows:

1. Plane sections before bending remain plane after bending.
2. Stress is proportional to strain.
3. Masonry elements combine to form a homogenous member.
4. Masonry carries no tensile stress.
5. Reinforcement is completely surrounded by and bonded to masonry material so that they work together as a homogenous material within the range of allowable working stresses.

2111.15 Fireplaces within a dwelling unit

A new Subsection 2111.15 is added to read as follows:

2111.15 Fireplace within a dwelling unit. A gas or wood-burning fireplace within a dwelling unit shall comply with the 2003 International Residential Code.

2512.1.2 Weep screeds

A new Subsection 2512.1.2.1 is added to read as follows:

2512.1.2.1 Weep screed with stem walls. Where requirements of this code may impose a potential non-compliant weep screed clearance from earth or paved areas, a concrete or masonry stem wall designed for compliance with the required clearances shall be provided for these areas.

2702.2 Where required

A new Subsection 2702.2.20 is added to read as follows:

2702.2.20 Electric fire pumps. An emergency power supply shall be provided for electrical fire pumps that are not backed-up by a diesel driven fire pump. All wiring and transfer/switching equipment shall be in accordance with NFPA 20 and NFPA 70.

2902.1 Minimum number of fixtures

Table 2902.1 is amended to add a superscript letter (f) following the column heading for Water Closets to refer to a new footnote (f) below the table.

Table 2902.1 is further amended to add a new footnote (f) below the table to read:

f. Where urinals are provided, one water closet less than the number specified may be provided for each urinal installed, except the number of water closets in such cases shall not be reduced to less than one half of the minimum specified.

3002.4 Elevator car to accommodate ambulance stretcher

Subsection 3002.4 is amended to read as follows:

3002.4 Elevator car to accommodate ambulance stretcher. In buildings four stories in height or more, at least one elevator in each bank of elevators shall be provided for fire department emergency access to all floors. Each such elevator car shall be of such a size and arrangement to accommodate a 24-inch by 81-inch (610 mm by 2057 mm) ambulance stretcher in the horizontal, open position and shall be identified by the international symbol for emergency medical services (star of life). The symbol shall not be less than 3 inches (76 mm) high and shall be placed inside on both sides of the hoist way doorframe.

Note: A bank of elevators is a group of elevators or a single elevator controlled by a common operating system; that is, all those elevators that respond to a single call button constitute a bank of elevators.

3003.1.3 Two or more elevators

Subsection 3003.1.3 is amended to read as follows:

3003.1.3 Two or more elevators. Where two or more elevators are controlled by a common operating system, all elevators shall automatically transfer to standby power within 60 seconds after failure of normal power where the standby power source is of sufficient capacity to operate all elevators at the same time. Where the standby power source is not of sufficient capacity to operate all elevators at the same time, all elevators shall transfer to standby power in sequence, return to the designated landing and disconnect from the standby power source. After all elevators have been returned to the designated level, at least one elevator in each bank shall remain operable from the standby power source.

Note: A bank of elevators is a group of elevators or a single elevator controlled by a common operating system; that is, all those elevators that respond to a single call button constitute a bank of elevators.

SECTION 3109 SWIMMING POOL ENCLOSURES AND SAFETY DEVICES

Section 3109 is deleted in its entirety and replaced with a new Section 3109 to read as follows:

SECTION 3109 SWIMMING POOL ENCLOSURES AND SAFETY DEVICES.

See the 2003 Southern Nevada Pool Code.

3404.1 Where permitted

Subsection 3404.1, together with Subsections 3404.1.1 through 3404.1.4, are deleted and replaced with a new Subsection 3404.1, including an exception, and Subsection 3404.1.1 to read as follows:

3404.1 Number of exits. Every floor above the first story used for human occupancy shall have at least two separate exits. An exterior fire escape may not be used as one of the required exits unless specifically approved by the building official and fire chief.

Exception: In any occupied second story with an occupant load that does not require two (2) exits in accordance with Section 1014 and Table 1014.1, one exit is permitted.

3404.1.1 Existing fire escapes. Existing fire escapes shall be replaced with complying stairways during remodeling operations. Where such replacement is not feasible, the building official may consider alternative requirements.

3410.2 Applicability

Subsection 3410.2 is amended to read as follows:

3410.2 Applicability. Structures existing prior to the adoption of this code, in which there is work involving additions, alterations or changes of occupancy, shall be made to conform to the requirements of this section or the provisions of Sections 3403 through 3407. The provisions in Subsections 3410.2.1 through 3410.2.5 shall apply to the existing occupancies that will continue to be, or are proposed to be, in Groups A, B, E, F, M, R, S and U. These provisions shall not apply to buildings with occupancies in Group H or I.

CHAPTER 35 REFERENCED STANDARDS

Chapter 35 is amended to add the following standards:

STANDARD REFERENCE NUMBER	REFERENCED IN CODE SECTION NUMBER
ASTM D-235	1802.3.3
ASTM D-2435	1802.3.3
ASTM 1586-99	Appendix J, Subsection J102.1
NFPA 20	2702.2.20
NFPA 70	2702.2.20

I102.1 General

Subsection I102.1 is amended by adding an Exception following the definition of "Patio Covers," to read as follows:

Exception: In the case of an attached patio cover that shares a common wall with the main structure, the existing common wall and the openings of the main structure shall not be removed or modified except in order to comply with structural requirements.

J101.3 Relationship to other provisions

A new Subsection J101.3 is added to read as follows:

J101.3 Relationship to other provisions. The provisions of this Chapter shall not be deemed to supersede or waive the requirements or other provisions of Title 20 of the Las Vegas Municipal Code. All such provisions should be applied to the extent possible. Any conflict shall be resolved in favor of applying the more restrictive requirement or provision, unless otherwise determined by the building official in consultation with officials charged with the administration of Title 20.

J102.1 Definitions

Subsection J102.1 is amended by amending the initial paragraph to read as follows:

For the purposes of this Appendix J and Chapters 18 and 19 of this code, as adopted by the City, the terms, phrases and words listed in this section and their derivatives shall have the indicated meanings.

Subsection J102.1 is further amended by adding the following definitions:

BUILDING PAD. The soil, cut or fill site, outlined by the area of the footprint of the building plus a minimum of 5 additional feet (1524 mm) to the exterior. This includes any type of foundation system for this structure.

CHEMICAL ANALYSIS. The use of chemical methods in soils analysis to determine the specific content of soluble salt.

FINAL GRADING REPORT. A grading report stamped and signed by a registered design professional certifying that the building pad was constructed in conformance with the recommendations set forth in the Geotechnical report. This report contains explicit information and data that verifies compliance with the Geotechnical report of record including any approved supplements or addenda.

GEOTECHNICAL REPORT (SOILS REPORT). Data and engineering recommendations resulting from site exploration which evaluates the soil conditions and general site characteristics and suitability of the site for the proposed construction. A registered design professional shall prepare the report.

PAD CERTIFICATION (OR RECERTIFICATION) REPORT. A report stamped and signed by a registered design professional certifying that the building pad currently is in conformance with the recommendations set forth in the Geotechnical report of records. This report contains explicit information and data that verifies compliance to the Geotechnical report of record including any approved supplements or addendums.

REFUSAL. Refusal while advancing an exploration is recognized as a Standard Penetration blow count, as defined by ASTM 1586-99, exceeding 100 blows per full lineal foot.

SPECIAL GEOTECHNICAL CONSIDERATION AREA. A portion of Clark County where additional Geotechnical investigation requirements may apply. These areas are identified on the most recent edition of the "Clark County Soil Guidelines Reference Map(s)" as published by Clark County.

J103.3 Hazards

Subsection J103 is amended by adding a new Subsection J103.3 to read as follows:

J103.3 Hazards. Whenever the building official determines that any existing excavation or embankment or fill on private property has become a hazard to life and limb, or endangers property, or adversely affects the safety, use or stability of a public way or drainage channel, the owner of the property upon which the excavation or fill is located, or other person or agent in control of said property, upon receipt of notice in writing from the building official, shall within the period specified therein repair or eliminate such excavation or embankment to eliminate the hazard and to be in conformance with the requirements of this

code.

J104.2 Site plan requirements

Subsection J104.2 is amended by adding a new sentence at the end to read as follows:

All grading plans shall be prepared, stamped and signed by a registered design professional.

J105.2 Special inspections

Subsection J105.2 is amended by adding a new Subsection J105.2.1, together with Subsections J105.2.1.1 through J105.2.1.4, to read as follows:

J105.2.1 Completion of work and final reports. Report submittal shall be in compliance with Subsection 1704.1.2.

J105.2.1.1 Final grading report. Upon completion of pad grading (or foundation construction) and prior to a footing or foundation inspection, a final grading report shall be provided by an approved agency. Grading (or foundation construction) shall be observed and tested by an approved agency. At the option of the building official, a pad certification report submitted in accordance with Subsection J105.2.1.2 may be accepted as an interim report prior to a footing or foundation inspection. A final grading report will then be required prior to receiving a final inspection. The final grading report itself will contain all applicable test data and analysis of the data. Specific project information is also required if there were any changes to the geotechnical report of record or unusual circumstances encountered during grading.

The report shall also include all the following information:

1. Compaction test results, requirements, locations, and depth of backfill at test locations.
2. Moisture density values and curves that include classifications for all soils used in the grading operation.
3. Description of structure or pad including the proposed use.
4. Grading plan showing approximate locations of tests, dates, and depths of over-excavation observations, original contours and finish pad elevations.
5. Swell and solubility test requirements and results. This information shall be provided if required by the geotechnical report of record, elsewhere in the code, or if imported soils were utilized.
6. Type of foundation system applicable to work being certified (i.e. spread footings, strip footings, combination footings, drilled shafts, etc.).
7. Import material used, source of import, and tests indicating compliance with the geotechnical report of record recommendations, and classification in relation to Table 1904.3.
8. A statement describing the process of pad grading. Where applicable, this shall include, but not be limited to, the minimum depth of over-excavation, blending operations, the use of import soils, nested aggregate, organics encountered, and removal of unsuitable soils.
9. The preceding requirements shall be presented for each pad or structure being certified.

The final grading report remains valid for a maximum of six months after the completion of grading. The six-month period begins at the first test date of the final test of the final lift of the structural pad. Once expired, a pad recertification report is required.

J105.2.1.2 Pad certification report. This letter/report is used as an interim document until a final grading report is completed (i.e., a final grading report for the entire project or a particular phase(s) of a project). The approved agency shall prepare this report signed by a registered design professional and certifying that the grading and earthwork are complete and substantially comply with the requirements of the geotechnical report of records including any approved supplements or addenda. Specific project information is also required if there were any changes to the geotechnical report of record or unusual circumstances encountered during grading.

J105.2.1.3 Finished floor elevation certificate. A Nevada Professional Land Surveyor shall certify the lowest habitable finished floor elevation to the elevation on the approved plans upon completion of the slab inspection and placement or the placement of the final construction form for the finished floor. All certifications required by this section shall be provided to and accepted by the building official prior to performance of any additional inspections. The minimum finished floor elevation shall comply with the approved plans and the allowable tolerance shall be minus (-) 0.0 feet to plus (+) 0.3 feet of the finished floor elevation detailed on the approved plans.

J105.2.1.4 Drainage compliance report. Upon completion of final grading, and prior to the final building inspection, a statement of compliance for drainage shall be provided by the registered design professional of record or the developer when approved by the building official. This report shall state that site conditions at the time of final construction provide positive drainage in compliance with approved drainage plan or the plot and grading plan. When engineered drainage features, facilities, or structures are required by the approved plans, the registered design professional of record shall verify that installed and constructed elements are in compliance with the approved plans. This includes site detention, lot-to-lot drainage, and drainage conveyance devices.

J105.2.1.5 Notification of noncompliance. If in the course of fulfilling their respective duties under this appendix, the registered design professional or approved agency finds that the work is not being done in conformance with this appendix or the approved plans, the discrepancies shall be immediately reported in writing to the contractor, the permittee, and to the building official.

J106.2 Excess excavations

Section J106 is amended by adding a new Subsection J106.2 to read as follows:

J106.2 Excess excavation. A disposal area must be designated prior to the issuance of a grading permit if off-site disposal of waste or excess excavation is anticipated. A grading permit and fill control may be required for the disposal area. Written permission from the owner of the designated disposal area shall be required.

J111 REFERENCED STANDARDS

Section J111 is amended to read as follows:

ASTM D 1557-00	Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lb/ft).	J107.5

J112 ADDITIONAL STANDARDS

Appendix J is amended by adding a new Section J112 to read as follows:

J112 ADDITIONAL STANDARDS

The following additional standards are adopted:

ASTM D1556 – In place Density of Soils by the Sand-Cone Method.
ASTM D2922 and D3017 – Density of Soils by Nuclear Methods and In-Place Moisture Content.

APPENDIX K FENCES, WALLS AND RETAINING WALLS

A new Appendix K is added to this code to read as follows:

APPENDIX K FENCES, WALLS AND RETAINING WALLS

SECTION K101 GENERAL

K101.1 Prohibition. It shall be unlawful for any person, contractor, firm or corporation to erect, install, construct or replace any fence, wall or retaining wall contrary to the provisions of this code.

K101.2 Applicable regulations. All regulations and requirements of the Building Code and any amendments, deletions and additions thereto shall apply to the erection, installation or construction of any fence, wall or retaining wall except that which may be inconsistent with this chapter.

SECTION K102 DEFINITIONS

K102.1 General. For purposes of this appendix, certain terms are defined as follows:

CUT. See "Excavation."

EXCAVATION. The removal of earth material by artificial means, also referred to as a cut.

FENCE. A structure of temporary or semi-permanent material such as wrought iron, wire, wood, screen, vinyl, plastic, etc., that is erected for purposes of enclosure, division of property or decoration.

FILL. The deposition of earth materials by artificial means.

RETAINING WALL. Any wall that is used to resist the lateral displacement of earth or any other material with a difference in elevation of the material from one side to the other exceeding 24 inches (610 mm) in height.

WALL. A structure of stone, brick, masonry, concrete or other similar permanent material, raised to some height and erected for purposes of enclosure, division of property or decoration.

SECTION K103 PERMITS

K103.1 Permits required. No fence, wall or retaining wall regulated by this code shall be erected, constructed, enlarged, altered, repaired, moved, improved, converted or demolished unless a separate permit for each fence, wall or retaining wall is obtained from the building official.

K103.2 Separate permits required. A separate permit is required for each parcel of land upon which the fence, wall or retaining wall is to be located.

> **Exception:** Only one permit is required for multiple fence(s), wall(s) or retaining wall(s) constructed along property lines in connection with the development of a subdivision, provided that a legal description of the property is submitted together with a dimensioned plot plan showing the exact location of the fence, wall or retaining wall and all other recorded lot and easement lines.

K103.3 Application for a fence, wall or retaining wall permit. To obtain a permit, the applicant shall first file an application on a form furnished by the jurisdiction for that purpose. The application shall include the following:

1. The name and address of the owner of the real property upon which the fence, wall or retaining wall is to be located.
2. The type of material to be used for construction of the fence, wall, or retaining wall.
3. The total length, height and square footage of each fence, wall or retaining wall.
4. The authorized agent to perform construction.
5. A dimensioned drawing that identifies the location of each fence, wall or retaining wall with respect to the property or lot lines, easements, streets, and other rights-of-way. Existing construction and drainage features shall be clearly identified on the drawings.
6. The location of all light standards, gas and water meters, and fire hydrants.
7. Other information deemed pertinent by the building official.

K103.4 Drawings and specifications. Drawings and specifications required for retaining walls shall be prepared by a registered design professional. The design shall be in accordance with the applicable chapters of this code. Drawings or specifications for fences and walls need not be submitted unless required by the building official. Drawings and specifications shall be submitted for retaining walls showing that the retaining wall is designed in accordance with this code.

SECTION K104 GENERAL REQUIREMENTS AND LIMITATIONS

K104.1 General. General requirements and limitations shall be as follows:

1. No fence, wall or retaining wall shall be placed within a right-of-way unless granted permission by the authority having jurisdiction.
2. The height and location of a fence, wall and or retaining wall shall comply with all zoning ordinances and regulations of the authority having jurisdiction.
3. Fences, walls or retaining walls shall not be constructed closer than 18 inches (457.2 mm) from any light standard, gas meter or water meter, and shall be in accordance with published standards of the department or agency having authority of utility easements, when located within a utility easement. Fences, walls or retaining walls shall not be constructed closer than 30 inches (762 mm) from the back or 36 inches (914.4 mm) from either side of a fire hydrant.

4. Special inspections, if required, shall be in accordance with Chapter 17.

K104.2 Required inspections. The following shall apply to special inspections under this appendix:

1. All footings shall be inspected to verify location to property line, structures, and compliance with the approved plans and permit.
2. Concrete foundations shall not be poured until footings have been inspected and approved by the building official.
3. No wall or retaining wall shall be grouted until the reinforcing required has been inspected and approved by the building official.
4. No retaining wall shall be backfilled until verification of the required damp-proofing and drainage has been inspected and approved by the building official.

K104.3 Natural drainage. No permits shall be issued for fences, walls or retaining walls, which would block any natural drainage channel.

K104.4 Prohibited materials. Walls, fences and retaining walls shall not be constructed of materials which impose a direct safety hazard, such as pointed posts, stakes or pickets, components intended for electrocution, embedded glass, nails, barbed or razor type wire, or other sharp cutting objects.

Exception: Manufactured barbed or razor wire may be used when its detailed use, location, and construction requirements are approved by the Planning Commission.

SECTION K105 IMPLEMENTATION

K105.1 Implementation. The building official is authorized to formulate procedural guidelines to be used in implementing this appendix.

CITY OF LAS VEGAS

AMENDMENTS TO
2003 INTERNATIONAL RESIDENTIAL CODE

PREFACE

This document comprises the Amendments to the 2003 International Residential Code as published by the International Code Council. The Amendments were developed by the City of Las Vegas to be adopted by reference. These Amendments are not to be considered part of a local government's building code unless they have been adopted by that local government. These Amendments are not intended to prevent the use of any material or method of construction not specifically prescribed herein, provided any alternate has been approved and its use authorized by the building official. This document is available to be adopted by any jurisdiction without permission or approval from the City of Las Vegas.

TABLE OF CONTENTS

NOTE: This Table of Contents is included for the sake of convenience, but is not officially part of the adopted Amendments. Efforts have been made to ensure completeness and accuracy of the Table of Contents, but its completeness and accuracy cannot be guaranteed.

Preface

City of Las Vegas Amendments to the 2003 International Residential Code

CHAPTER 1 ADMINISTRATION

Chapter 1 is deleted in its entirety and replaced with a new Chapter 1 to read as follows:

CHAPTER 1 ADMINISTRATION

SECTION R101 GENERAL

R101.1 Title and Scope. These regulations shall be a part of, and may be referred to as the Building Code, as adopted by the City of Las Vegas (hereinafter referred to as "this code"). The provisions of this code shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of detached one-and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories in height with a separate means of egress and their accessory structures.

Unless any such code has been specifically adopted by the City, any reference to an I-Code (international code), including without limitation the following, shall be deemed to refer to the equivalent code, if any, that has been adopted by the City:

ICC Electrical Code
International Energy Conservation Code
International Existing Building Code
International Fire Code
International Fuel Gas Code
International Mechanical Code
ICC Performance Code
International Plumbing Code
International Private Sewer Disposal Code
International Administrative Code
International Urban-Wildland Interface Code
International Zoning Code

Equivalent adopted versions include the:

2002 National Electrical Code
1992 Model Energy Code
2003 NFPA 1 Fire Code
2000 Uniform Mechanical Code
2000 Uniform Plumbing Code
1997 Uniform Administrative Code

(end of New Chapter 1)

SECTION R202 DEFINITIONS

Section R202 is amended by adding two new definitions to read as follows:

SLEEPING AREA. Any area that includes one or more sleeping rooms that are located on the same floor and are not separated by another habitable room, such as a living room, dining room, or kitchen (but not a bathroom, hallway or closet).

SLEEPING ROOM. Any bedroom or other room that is ordinarily used or intended to be used for sleeping purposes. The term is deemed to include any room that contains a closet and that provides for occupant privacy.

R301.1.2 Construction systems

Subsection R301.1.2 is amended by adding a new paragraph to read as follows:

All plain (unreinforced) concrete, plain (unreinforced) masonry, and rubble stone masonry construction is prohibited. All tables, figures and references for these unreinforced systems are deleted.

R301.1.3 Engineered design

Subsection R301.1.3 is amended to read as follows:

R301.1.3 Engineered design. When a building of otherwise conventional construction contains structural elements exceeding the limits of Section R301, or otherwise not conforming to this code, including applicability limits, the entire structure shall be designed in accordance with the provisions of the 2003 International Building Code. Engineered design in accordance with the 2003 International Building Code is permitted for all buildings and structures.

Table R301.2(1) CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

Table R301.2(1) is amended to read as follows:

TABLE R301.2(1)
CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

GROUND SNOW LOAD	WIND SPEED[e] (mph)	SEISMIC DESIGN CATEGORY[g]	SUBJECT TO DAMAGE FROM				WINTER DESIGN TEMP[f]	ICE SHIELD UNDER-LAYMENT REQUIRED[i]	FLOOD HAZARDS[h]	AIR FREEZING INDEX[j]	MEAN ANNUAL TEMP[k]
			Weathering[a]	Frost line depth[b]	Termite[c]	Decay[d]					
0	90	D_1	Negligible	12"	Moderate to Heavy	None to Slight	28°	No	*	35 (F°-days)	66.3F°

For SI: 1 pound per square foot = 0.0479 kN/m^2, 1 mile per hour = 1.609 km/h.

a. Weathering may require a higher strength concrete or grade of masonry than necessary to satisfy the structural requirements of this code. The weather column shall be filled in with the weathering index (i.e., "negligible," "moderate" or "severe") for concrete as determined from the Weathering Probability Map [Figure R301,2(3)]. The grade of masonry units shall be determined from ASTM

C34, C55, C62, C73, C90, C128, C145, C216 or C652.

b. The frost line depth may require deeper footings than indicated in Figure R403.1(1). The jurisdiction shall fill in the frost line depth column with the minimum depth of footing below finish grade.
c. The jurisdiction shall fill in this part of the table with "very heavy," "moderate to heavy," "slight to moderate," or "none to slight" in accordance with Figure R301.2(6) depending on whether there has been a history of local damage.
d. The jurisdiction shall fill in this part of the table with "moderate to severe," "slight to moderate," or "none to slight" in accordance with Figure R301.2(7) depending on whether there has been a history of local damage.
e. The jurisdiction shall fill in this part of the table with the wind speed from the basic wind speed map [Figure R301.2(4)]. Wind exposure category shall be determined on a site-specific basis in accordance with Subsection R301.2.1.4.
f. The outdoor design dry-bulb temperature shall be selected from the columns of 97-1/2 percent values for winter from Appendix D of the International Plumbing Code. Deviations from the Appendix D temperatures shall be permitted to reflect local climates or local weather experience as determined by the building official.
g. The jurisdiction shall fill in this part of the table with the Seismic Design Category determined from Subsection R301.2.2.1.
h. The jurisdiction shall fill in this part of the table with (a) the date of the jurisdiction's entry into the National Flood Insurance program (date of adoption of the first code or ordinance for management of flood hazard areas), (b) the date(s) of the currently effective FIRM and FBFM, or other flood hazard map adoption by the community, as may be amended.
i. In accordance with Subsections R905.2.7.1, R905.4.3, R905.5.3, R905.6.3, R905.7.3 and R905.8.3 for areas where the average daily temperature in January is 25° F (-4° C) or less, or where there has been a history of local damage from the effects of ice damming, the jurisdiction shall fill in this part of the table with "YES". Otherwise, the jurisdiction shall fill in this part of the table with "NO".
j. The jurisdiction shall fill in this part of the table with the 100-year return period air freezing index (BF-days) from Figure R403.3(2) or from the 100-year (99%) value on the National Climatic Data Center data table "Air Freezing Index-USA Method (Base 32° Fahrenheit)" at www.ncdc.noaa.gov/fpsf.htm.
k. The jurisdiction shall fill in this part of the table with the mean annual temperature from the National Climatic Data Center data table "Air Freezing Index-USA Method (Base 32° Fahrenheit)" at www.ncdc.noaa.gov/fpsf.htm.

* h. August 16, 1995. "The Flood Insurance Study for Clark County, Nevada and Incorporated Areas", as amended or revised with the accompanying Flood Insurance Rate Map (FIRM) and Flood Boundary and Floodway Map (FBFM) and related supporting data along with any revisions thereto.

R301.2.2.1 Determination of seismic design category

Subsection R301.2.2.1 is amended to read as follows:

R301.2.2.1 Determination of seismic design category. Buildings shall be assigned a Seismic Design Category of D_1.

R301.2.2.1.1 Alternate determination of seismic design category

Subsection R301.2.2.1.1 is amended to add an exception to read as follows:

Exception: Seismic design categories A and B shall not be permitted for wood or light gage steel construction. Seismic design categories A, B, and C shall not be permitted for any concrete or masonry construction.

R301.2.2.2.2 Irregular buildings

Subsection R301.2.2.2.2 is amended so that the first paragraph, before Items 1 through 7, reads as follows:

R301.2.2.2.2 Irregular buildings. Concrete construction complying with Section R611 or R612 and conventional light-frame construction shall not be used in irregular structures in Seismic Design Categories C, D_1, and D_2. Such irregular structures shall be designed in accordance with the provisions of the International Building Code. A building shall be considered to be irregular when one or more of the following conditions occur:

R301.3 Story height

Subsection R301.3 is amended so that Items 1, 2, and 3 thereof read as follows:

1. For wood wall framing, the laterally unsupported bearing wall stud height permitted by Table R602.3(5) plus a height of floor framing not to exceed 16 inches, except that the height of floor framing may exceed 16 inches, up to a maximum of 24 inches, if the braced wall length required by Table R602.10.1 is multiplied by 1.05.

   Exception: For wood framed wall buildings with bracing in accordance with Table R602.10.1, the wall stud clear height used to determine the maximum permitted story height may be increased to 12 feet without requiring an engineered design for the building wind and seismic force resisting systems provided that the length of bracing required by Table R602.10.1 is increased by multiplying by a factor of 1.20. Wall studs are still subject to the requirements of this section.

2. For steel wall framing, a stud height of 10 feet, plus a height of floor framing not to exceed 16 inches. Where floor height is between 16 inches and 24 inches, the minimum percentage of full height structural sheathing shall be multiplied by 1.05.

3. For masonry walls, a maximum bearing wall clear height of 12 feet plus a height of floor framing not to exceed 24 inches.

Table R301.5 MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS

Table R301.5 is amended by amending the live load figure for sleeping rooms, so that the row pertaining to that use reads as follows:

USE	LIVE LOAD
Sleeping rooms	40

Table R301.5 is further amended by adding a new Note "g" to read as follows:

g. Where it can be determined in designing floor that the actual live load will be greater than the value

shown in Table R301.5, the actual live load shall be used in the design of such buildings or portions thereof. Special provisions shall be made for machine and apparatus loads.

R301.6 Roof load

Subsection R301.6 is amended to read as follows:

R301.6 Roof load. Roof shall be designed for the live load indicated in Table R301.6 or the snow load indicated in Table R301.2(1), whichever is greater. Roof live loads in accordance with Subsection 1607.11 of the 2003 International Building Code may be used in place of the loads in Table R301.6.

R303.6.1 Light activation

Subsection R303.6.1, including its Exception, is deleted and replaced with the following Subsection R303.6.1 and exceptions to read as follows:

R303.6.1 Light activation. The control for the activation of the required interior and exterior stairway lighting shall be accessible at the top and bottom of each stairway without traversing any steps. The illumination of exterior stairways shall be controlled from outside the dwelling unit and adjacent to the exterior stairway. Additional control may be located inside the dwelling unit.

Exceptions:
1. Lights that are continuously illuminated or automatically controlled.
2. Interior stairways with five risers or less.

Figure R307.2 MINIMUM FIXTURE CLEARANCES

Figure R307.2 is deleted in its entirety without replacement.

R311.5.3 Stair treads and risers

Subsection R311.5.3.1 is amended to read as follows:

R311.5.3.1 Riser height. The maximum riser height shall be 8 inches (203 mm). The riser shall be measured vertically between leading edges of the adjacent treads. The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5 mm).

Subsection R311.5.3.2 is amended to read as follows:

R311.5.3.2 Tread depth. The minimum tread depth shall be 9 inches (229 mm). The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5mm). Winder treads shall have a minimum tread depth of 9 inches (229 mm) measured as above at a point 12 inches (305 mm) from the side where the treads are narrower. Winder treads shall have a minimum tread depth of 6 inches (152 mm) at any point. Within any flight of stairs, the greatest winder tread depth at the 12 inch (305 mm) walk line shall not exceed the smallest by more than 3/ 8 inch (9.5 mm).

R323.2.3 Foundation design and construction

Subsection R323.2.3 is amended to read as follows:

R323.2.3 Foundation design and construction. Foundation walls for all buildings and structures erected in flood hazard areas shall meet the requirements of Chapter 4.

> **Exception:** Unless designed in accordance with Section 404, the unsupported height of 8 inches (203 mm) reinforced masonry walls shall be no greater than 8 feet (2438 mm). For purposes of this exception, unsupported height is the distance from the finished grade of the under-floor space and the top of the wall.

R401.4 Soil tests

Subsection R401.4 is amended to read as follows:

R401.4 Soils tests. A soils test (geotechnical report) shall be required for all projects that require new foundations. The geotechnical report shall be prepared by a registered design professional. Recommendations included in the report and approved by the building official shall be incorporated in the construction documents. Minimum explorations shall conform to Subsection 1802.4.2 of the 2003 International Building Code (IBC), as adopted by the City. Information contained in the geotechnical report shall conform to Subsection 1802.6 of the 2003 IBC, as adopted by the City.

> **Exception:** At the option of the building official, habitable remodels or additions to a dwelling unit with a footprint less than 600 square feet may be exempted from submitting a geotechnical report.

R402.2 Concrete

Subsection R402.2 is deleted in its entirety and replaced with a new Subsection R402.2 to read as follows:

R402.2 Concrete. Concrete shall have a minimum specified compressive strength of 4500 psi with Type V cement and a maximum water-cementitious materials ratio, by weight, normal-weight aggregate concrete of 0.45.

> **Exception:** The concrete strength shall be 2500 psi minimum with Type V cement if the geotechnical report classifies the sulfate exposure as negligible and is accepted by the building official.

Figure R403.1(1) CONCRETE AND MASONRY FOUNDATION DETAILS

Figure R403.1(1) is amended to delete each reference to 3.5 inches as the minimum slab thickness and replace it with a 4.0 inch minimum slab thickness.

R403.1.1 Minimum size

Subsection R403.1.1 is amended to read as follows:

R403.1.1 Minimum size. Minimum sizes for concrete and masonry footings shall be as set forth in Table R403.1 and Figure R403.1(1). The footing width, W, shall be based on the load-bearing value of the soil

in accordance with Table R401.4.1. Spread footings shall be at least 12 inches (305 mm) in thickness, or as required for development of reinforcement in tension or compression. Footing projections, P, shall be at least 2 inches (51 mm) and shall not exceed the thickness of the footing. The size of footings supporting piers and columns shall be based on the tributary load and allowable soil pressure in accordance with Table R401.4.1. Footings for wood foundations shall be in accordance with the details set forth in Subsection R403.2, and Figures R403.1(2) and R403.1(3).

R403.1.3 Seismic reinforcing

Subsection 403.1.3 is amended to delete the entire Exception with no replacement.

R403.1.3.2 Slabs-on-ground with turned-down footings

Subsection 403.1.3.2 is amended to delete the entire Exception with no replacement.

R403.1.6 Foundation anchorage

Subsection 403.1.6 is amended to delete the second paragraph (but not the Exception) and replace it with a paragraph to read as follows:

The wood sole plate at the exterior walls on monolithic slabs and wood sill plate shall be anchored to the foundation with anchor bolts spaced a maximum of 4 feet (1219 mm) on center. There shall be a minimum of two bolts per plate section with one bolt located not more than 12 inches (305 mm) or less than seven bolt diameters from each end of the plate section. In Seismic Design Categories C, D_1 and D_2, anchor bolts shall also be spaced at 4 feet (1219 mm) on center and located within 12 inches (305 mm) from the ends of each plate section at interior braced wall lines when required by Subsection R602.10.9 to be supported on a continuous foundation. Bolts shall be at least ½ inch (12.7 mm) in diameter and shall extend a minimum of 7 inches (178 mm) into masonry or concrete. Interior bearing wall sole plates on monolithic slab foundations shall be positively anchored with approved fasteners. A nut and washer shall be tightened on each bolt to the plate. Sills and sole plates shall be protected against decay and termites where required by Section R318 and R319. Cold-formed steel framing systems shall be fastened to the wood sill plates or anchored directly to the foundation as required in Subsections R505.3.1 or R603.1.1.

R404.1.1 Masonry foundation walls

Subsection R404.1.1 is amended to read as follows:

R404.1.1 Masonry foundation walls. Concrete masonry and clay masonry foundation walls shall be constructed as set forth in Tables R404.1.1(2), R404.1.1(3) and R404.1.1(4) and shall also comply with the provisions of this section and the applicable provisions of Sections R606, R607, and R608. In Seismic Design Categories D_1 and D_2, concrete masonry and clay masonry foundation walls shall comply with Subsection R404.1.4. Rubble stone masonry foundation walls shall be constructed in accordance with Subsections R404.1.8 and R606.2.2. Rubble stone masonry walls shall not be used in Seismic Design Categories D_1 and D_2.

R404.1.2 Concrete foundation walls

Subsection R404.1.2 is amended to read as follows:

R404.1.2 Concrete foundation walls. Concrete foundation walls shall be constructed as set forth in Tables R404.1.1(2), R404.1.1(3) and R404.1.1(4), and shall also comply with the provisions of this section and the applicable provisions of Subsection R402.2. Seismic Design Categories D_1 and D_2, concrete foundation walls shall comply with Subsection R404.1.4.

R404.1.4 Seismic Design Categories D_1 and D_2

Subsection R404.1.4 is amended to delete in its entirety the second paragraph (following Items 1 through 5) and to replace it with a new paragraph to read as follows:

Vertical reinforcement for masonry stem walls shall be tied to the horizontal reinforcement in the footings. Masonry stem walls located in Seismic Design Categories D_1 and D_2 shall have a minimum vertical reinforcement of one No. 4 bar to match wall reinforcing, located a maximum of 4 feet (1220 mm) on center in grouted cells.

R404.1.5.1 Pier and curtain wall foundations

Subsection R404.1.5.1 is amended so that Item 2 thereof reads as follows:

2. The minimum actual thickness of a load-bearing masonry wall shall not be less than 8 inches (203 mm) nominal or 7-5/8 inches (194 mm) actual thickness, and shall be bonded integrally with piers spaced in accordance with Subsection R606.8.

SECTION R502 WOOD FLOOR FRAMING

Section R502 is amended by adding at the beginning, before Subsection R502.1, a new paragraph to read as follows:

Applicability limits. The provisions of this Section R502 shall control the construction of wood roof framing for buildings not greater than 60 feet (18288 mm) in length perpendicular to the joist, rafter or truss span, and not greater than 36 feet (10973 mm) in width parallel to the joist span or truss.

R502.3 Allowable joist spans

Subsections R502.3.1 and R502.3.2 are deleted in their entirety and replaced with new Subsections R502.3.1 and R502.3.2 to read as follows:

R502.3.1 Attic joists. Table R502.3.1(1) shall be utilized to determine the maximum allowable span of floor joists that support attics that are accessed by means of a fixed stairway provided that the design live load does not exceed 30 psf (1.44 kN/m^2) and the design dead load does not exceed 10 psf (0.48 kN/m^2). The allowable span of ceiling joists that support attics utilized for limited storage or not storage shall be determined in accordance with Subsection R802.4.

R502.3.2 Other floor joists. Table R502.3.1(2) shall be utilized to determine the maximum allowable span of floor joists that support all areas of the building, other than attics, provided that the design live load does not exceed 40 psf (1.92 kN/m^2) and the design dead load does not exceed 10 psf (0.48 kN/m^2).

R502.6.2 Joist framing

Subsection R502.6.2 is amended to read as follows:

R502.6.2 Joist framing. Joists framing into the side of a wood girder shall be supported by approved framing anchors.

R502.10 Framing of openings

Subsection R502.10 is amended to read as follows:

R502.10 Framing of openings. Openings in floor framing shall be framed with a header and trimmer joists. When the header joist span does not exceed 4 feet (1219 mm), the header joist may be a single member the same size as the floor joist. Single trimmer joists may be used to carry a single header joist that is located within 3 feet (914 mm) of the trimmer joist bearing. When the header joist span exceeds 4 feet (1219 mm), the trimmer joists and the header joist shall be doubled and of sufficient cross section to support the floor joists framing into the header. Approved hangers shall be used for the header joist to trimmer joist connections when the header joist span exceeds 6 feet (1829 mm). Tail joists over 12 feet (3658 mm) long shall be supported at the header by framing anchors.

R502.11.4 Truss design drawings

Subsection R502.11.4 is amended so that the first paragraph (before Items 1-12) reads as follows:

R502.11.4 Truss design drawings. Truss design drawings, prepared in compliance with Subsection R502.11.1, shall be provided to the building official and approved prior to fabrication. Truss design drawing shall be provided with the shipment of trusses delivered to the job site. Truss design drawings shall include, at a minimum, the information specified below:

(Items 1-12 remain unchanged)

R503.3.2 Floor underlayment

Subsection R503.3.2 is amended to read as follows:

R503.3.2 Floor underlayment. Particleboard floor underlayment shall conform to Type PBU and shall not be less than 5/16 inch (7.94 mm) in thickness.

SECTION R602 WOOD WALL FRAMING

Section R602 is amended by adding at the beginning, before Subsection R602.1, a new paragraph to read as follows:

Applicability limits. The provisions of this Section R602 shall control the construction of exterior wood wall framing and interior bearing wood wall framing for buildings not greater than 60 feet (18288 mm) in length perpendicular to the joist, rafter or truss span, and not greater than 36 feet (10973 mm) in width parallel to the joist span or truss.

Table R602.3(5) SIZE, HEIGHT AND SPACING OF WOOD STUDS

Table R602.3(5) is amended by deleting in its entirety, and substituting therefore a new Table R602.3(5) to read as follows:

TABLE R602.3(5)
SIZE, HEIGHT AND SPACING OF WOOD STUDS[a]
FOR BUILDINGS 36 FEET WIDE OR LESS

STUD SIZE (inches)	INTERIOR BEARING WALLS					INTERIOR NON-BEARING WALLS		EXTERIOR NON-BEARING WALLS[d]	
	Laterally unsupported stud height (feet)[a],	Maximum spacing when supporting roof and ceiling only (inches)[b]	Maximum spacing when supporting one floor, roof, and ceiling (inches)[b]	Maximum spacing when supporting two floors, roof, and ceiling (inches)[b]	Maximum spacing when supporting one floor only (inches)[b]	Laterally unsupported stud height (feet)[a]	Maximum spacing (inches)	Laterally unsupported stud height (feet)[a]	Maximum spacing (inches)
2 x 4	10	12	8	8	16	14	12	14	12[c]
2 x 6	10	24	24	24	24	20	16	20	16[c]

a. Listed heights are distances between points of lateral support placed perpendicular to the plane of the wall. Increases in unsupported height are permitted where justified by analysis.
b. Roof tributary = 18 ft, floor tributary = 10 ft.
c. The on-center spacing for studs located within 3 ft. of building exterior corners shall be reduced to the next smaller spacing.
d. 1 ft of floor tributary and 3 ft of roof tributary included.

TABLE R602.3.1 MAXIMUM ALLOWABLE LENGTH OF WOOD WALL STUDS . . .

Table R602.3.1 is deleted in its entirety, and replaced with a new Table R602.3.1 to read as follows:

TABLE R602.3.1
MAXIMUM ALLOWABLE LENGTH OF WOOD WALL STUDS EXPOSED TO WIND SPEED OF 90 MPH OR LESS IN SEISMIC DESIGN CATEGORIES A, B, C and D[b, c]

HEIGHT (feet)	ON-CENTER SPACING (inches)			
	24	16	12	8
Supporting a roof only; roof tributary = 18 ft., plus up to 2' eave				
8	2x6	2x4	2x4	2x4
9	2x6	2x4	2x4	2x4
10	2x6	2x6	2x4	2x4
12	2x6	2x6	2x4	2x4
14	2x6	2x6	2x6	2x4
16	NA[a]	2x6	2x6	2x6
18	NA[a]	2x6	2x6	2x6
20	NA[a]	NA[a]	2x6	2x6
22	NA[a]	NA[a]	2x6[c]	2x6
24	NA[a]	NA[a]	NA[a]	NA[a]
Supporting one floor and a roof; roof tributary = 18 ft., plus up to 2' eave, and floor tributary = 10 ft.				
8	2x6	2x6	2x4	2x4
9	2x6	2x6	2x4[c]	2x4
10	2x6	2x6	2x6	2x4
12	2x6	2x6	2x6	2x4
14	NA[a]	2x6	2x6	2x6
16	NA[a]	2x6[c]	2x6	2x6
18	NA[a]	NA[a]	2x6	2x6
20	NA[a]	NA[a]	NA[a]	2x6
22	NA[a]	NA[a]	NA[a]	2x6
24	NA[a]	NA[a]	NA[a]	NA[a]
Supporting two floors and a roof; roof tributary = 18 ft., plus up to 2' eave, and floor tributary = 10 ft.				
8	2x6	2x6	2x4	2x4
9	2x6	2x6	2x6	2x4
10	2x6	2x6	2x6	2x4[c]
12	NA[a]	2x6	2x6	2x6
14	NA[a]	2x6	2x6	2x6
16	NA[a]	NA[a]	2x6	2x6
18	NA[a]	NA[a]	NA[a]	2x6
20	NA[a]	NA[a]	NA[a]	2x6
22	NA[a]	NA[a]	NA[a]	NA[a]
24	NA[a]	NA[a]	NA[a]	NA[a]

For SI : 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square foot = 0.0479 KN/m^2 , 1 pound square inch = 6.895 kpa, 1 mile per hour =1.609 km/h

a. Design required.
b. Eaves are not greater than 2', live load not exceeding 20 psf, snow load not exceeding 20 psf, 2x4 studs 10' or less shall be Douglas Fir stud grade or better, 2x4 studs greater than 10' shall be Douglas Fir No.2 or better, 2x6 studs shall be Douglas Fir No.2 or better. Where the conditions are not within these parameters, design is required.
c. The on-center spacing for studs located within 3' of building exterior corners shall be reduced to next smaller spacing.

R602.3.2 Top plate

Subsection R602.3.2 is amended so that the Exception reads as follows:

Exception: A single top plate may be installed in an interior non-bearing, non-braced (shear) stud wall, provided the plate is adequately tied at joints, corners and intersecting walls by a minimum 3-inch-by-6-inch by a 0.036-inch-thick (77 mm by 152 mm by 0.914 mm) galvanized steel plate that is nailed to each wall or segment of wall by six 8d nails on each side, provided the rafters or joists are centered over the studs with a tolerance of no more than 1 inch (25.4 mm). The top plate may be omitted over lintels that are adequately tied to adjacent wall sections with steel plates or equivalent as previously described.

R602.10.3 Braced wall panel construction methods

Subsection R602.10.3 is amended to delete bracing methods # 1, #2, #6, and #8 without replacement, and to add, following the Exception, a new paragraph to read as follows:

Regardless of which bracing method is used in this Subsection R602.10.3, a minimum of two anchor bolts shall be installed in each panel. Anchor bolts shall be placed within 12 inches of the ends of braced wall panels and evenly spaced at 24" o.c. maximum between ends of the braced walls for one-story structures and 16" o.c. maximum between ends of braced wall for all two-story and three-story structures. All braced walls shall have a minimum of two (2) studs at each end.

A new Subsection R602.10.3.1 is added to read as follows:

R602.10.3.1 Braced wall anchorage. Braced wall anchorage shall be in accordance with Table R602.10.3 and Figure R602.10.3.1. Braced walls that are not stacked shall be strapped or tied down with devices having a minimum capacity as shown in the table for the story at which the wall occurs.

The required braced wall panel tie-down device capacity shall be 1600 pounds for each story having a braced wall panel and shall be additive for stacked braced wall panels.

Subsection R602.10.3 is amended further to add a new Table R602.10.3 and a new Figure R602.10.3.1, to read as follows:

TABLE R602.10.3
CAPACITY OF TIE-DOWN DEVICES AT BRACED WALL PANEL ENDS OF SINGLE-STORY AND STACKED BRACED WALLS[a,b]

BUILDING HEIGHT →	ONE-STORY	TWO-STORY	THREE-STORY
Third Story	—	—	1600 lbs
Second Story	—	1600 lbs	3200 lbs
First Story	1600 lbs	3200 lbs	4800 lbs

a. Braced walls that are not stacked shall be strapped or tied down with devices having a minimum capacity, as shown in the Table, for the story at which the wall occurs.
b. The required braced wall panel tie-down device capacity shall be 1600 pounds for each story having a braced wall panel and shall be additive for stacked braced wall panels.

Figure R602.10.3.1: See page 13a.

R602.10.6 Alternate braced wall panels

Subsection R602.10.6 is amended to read as follows:

R602.10.6 Alternate braced wall panels in one- and two-story buildings. Alternate braced wall lines constructed in accordance with one of the following provisions shall be permitted to replace each 4 feet (1219 mm) of braced wall panel as required by Subsection R602.10.4:

1. In one-story buildings, each panel shall have a length of not less than 4 feet (1216 mm) and a height of not more than 10 feet (3048 mm). Each panel shall be sheathed on one face with 3/8-inch-minimum-thickness (9.5 mm) wood structural panel sheathing nailed with 8d common or galvanized box nails in accordance with Table R602.3(1) and blocked at all wood structural panel sheathing edges. Two anchor bolts installed in accordance with Figure R403.1(1) shall be provided in each panel. Anchor bolts shall be placed at panel quarter points. Each panel end stud shall have a tie-down device fastened to the foundation, capable of providing an uplift capacity of at least 2,800 pounds (1270 kg). The tie-down device shall be installed in accordance with the manufacturer's recommendations. The panels shall be supported directly on a foundation or on floor framing supported directly on a foundation which is continuous across the entire length of the braced wall line. This foundation shall be reinforced with not less than one No. 4 bar top and bottom. When the continuous foundation is required to have a depth greater than 12 inches (305 mm), a minimum 12-inch-by-12-inch (305 mm by 305 mm) continuous footing or turned down slab edge is permitted at door openings in the braced wall line. This continuous footing or turned down slab edge shall be reinforced with not less than one No. 4 bar top and bottom. This reinforcement shall be lapped 15 inches (381 mm) with the reinforcement required in the continuous foundation located directly under the braced wall line.

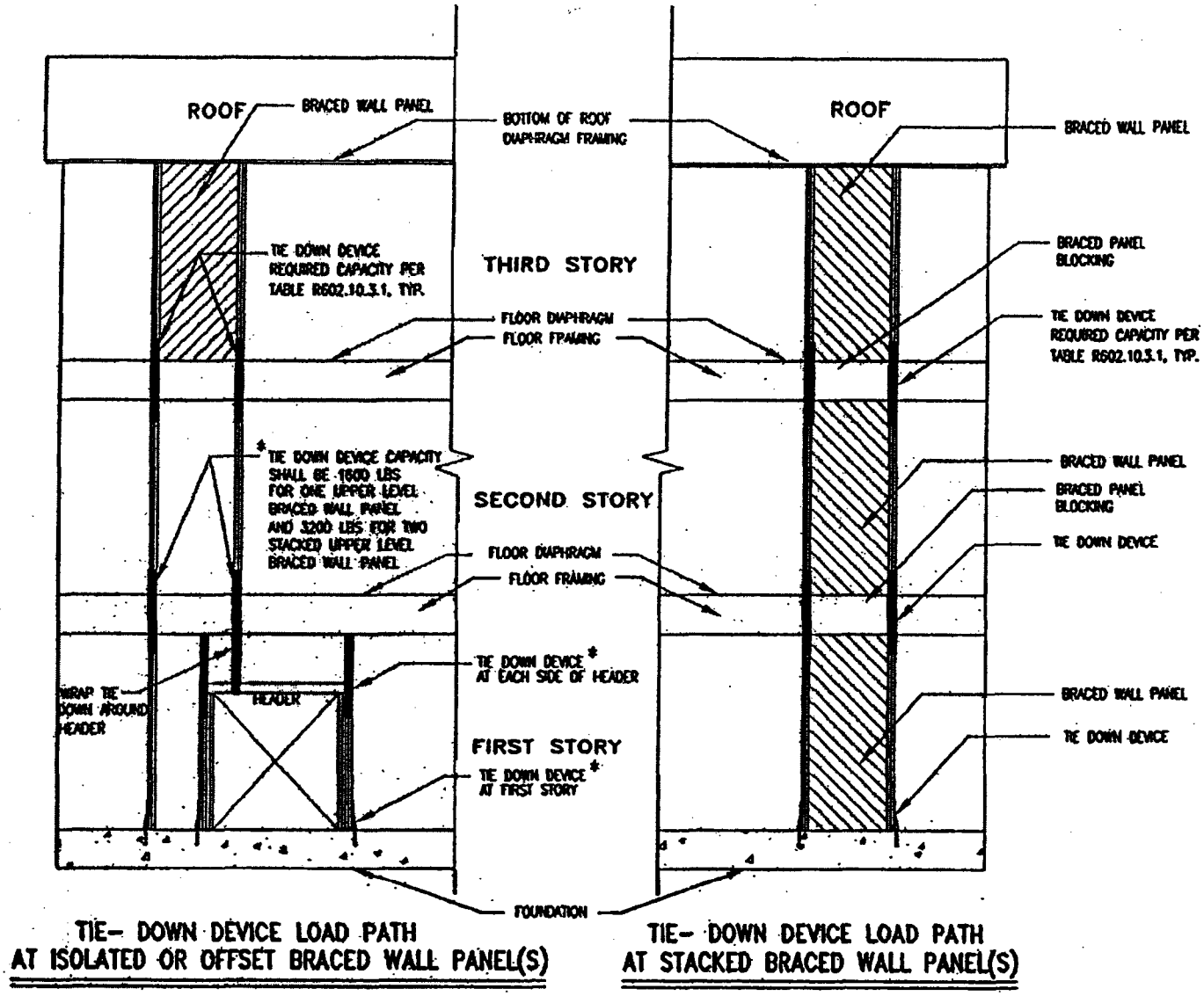


FIGURE R602.10.3.1

2. In the first story of two-story buildings, each braced wall panel shall be in accordance with Item 1 above, except that the wood structural panel sheathing shall be provided on both faces, sheathing edge nailing spacing shall not exceed four inches on center for the first-story and the roof, at least three anchor bolts shall be placed at one-fifth points, and tie-down device uplift capacity shall not be less than 5,000 pounds (2268 kg).

R602.10.11 Bracing in Seismic Design Categories D_1 and D_2

Subsection R602.10.11 is amended so that the first Exception reads as follows:

Exception: In one- and two-story buildings, spacing between braced wall lines shall not exceed 35 feet (10363 mm) on center in order to accommodate one single room not exceeding 900 square feet (83.61 m^2) in each dwelling unit. The length of wall bracing in braced wall lines spaced greater or less than 25 feet (7620 mm) apart shall be the length required by Table R602.10.1 multiplied by the appropriate adjustment factor from Table R602.10.11.

Exterior braced wall lines shall have a braced wall panel located at each end of the braced wall line.

R602.10.11.2 Sheathing attachment

Subsection R602.10.11.2 is amended to read as follows:

R602.10.11.2 Sheathing attachment. Adhesive attachment of wall sheathing without the use of fasteners, screws or nails, shall not be permitted in Seismic Design Categories C, D_1 and D_2.

Figure R603.3.1(2) WALL TO WOOD SILL CONNECTION

Figure R603.3.1(2) is amended to add a note to read as follows:

Note: Steel track may be attached without wood sill plate provided that a vapor barrier is installed between the concrete and the track.

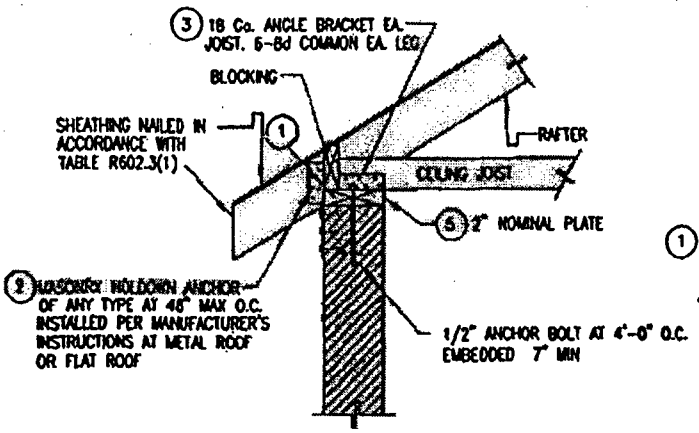
R606.8.2.1 Roof structures

Subsection R606.8.2.1 is amended to read as follows:

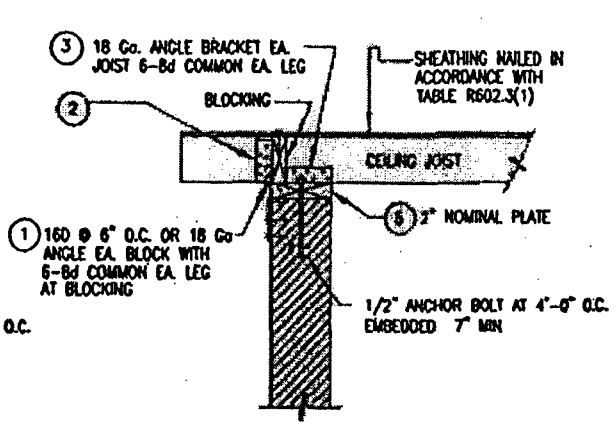
R606.8.2.1 Roof structures. Masonry walls shall be anchored to roof structures with metal strap anchors spaced at 4'0", maximum, and installed in accordance with the manufacturer's instructions; with ½-inch (12.7 mm) bolts spaced not more than 4'0" (1220 mm) on center with 18-gauge angle brackets at each joist; or other anchors approved by the building official. Anchors shall be embedded at least 6 inches (152 mm) into the masonry and shall be hooked or end with a bolt head or nut. Sill plate at roof structures on the masonry wall shall be of 2x framing with a minimum width of the wall width minus 5/8 inch (16 mm) with ½" anchor bolts installed as noted above. Bond beam at the top of the masonry wall shall be a minimum of 16 inches (203 mm) deep with one #5 reinforcing bar.

Figure R606.10(1) ANCHORAGE REQUIREMENTS FOR MASONRY WALLS LOCATED IN SEISMIC DESIGN CATEGORY A, B OR C AND WHERE WIND LOADS ARE LESS THAN 30 PSF

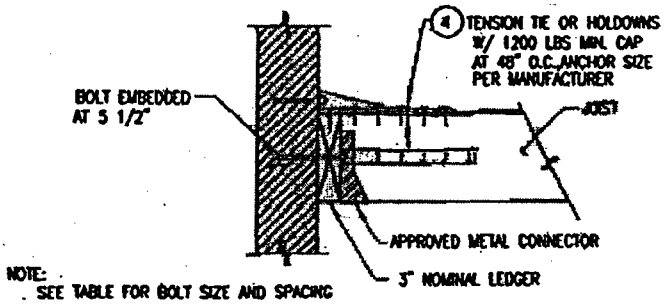
Figure R606.10(1) is deleted and replaced with a new Figure R606.10(1) to read as set forth on Pages 15a and 15b.



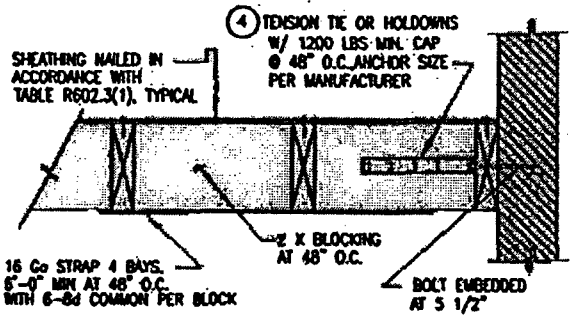
SLOPED ROOF



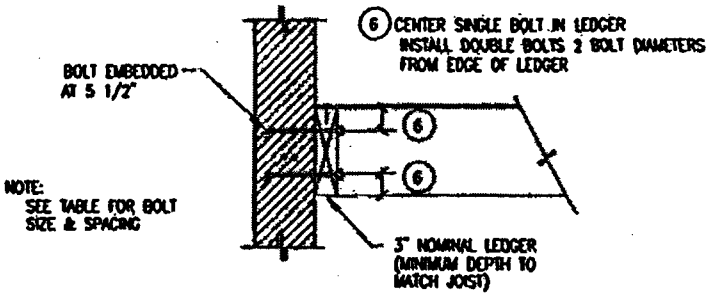
FLAT ROOF



JOIST PERPENDICULAR TO WALL



JOIST PARALLEL TO WALL



BOLTS AT LEDGER

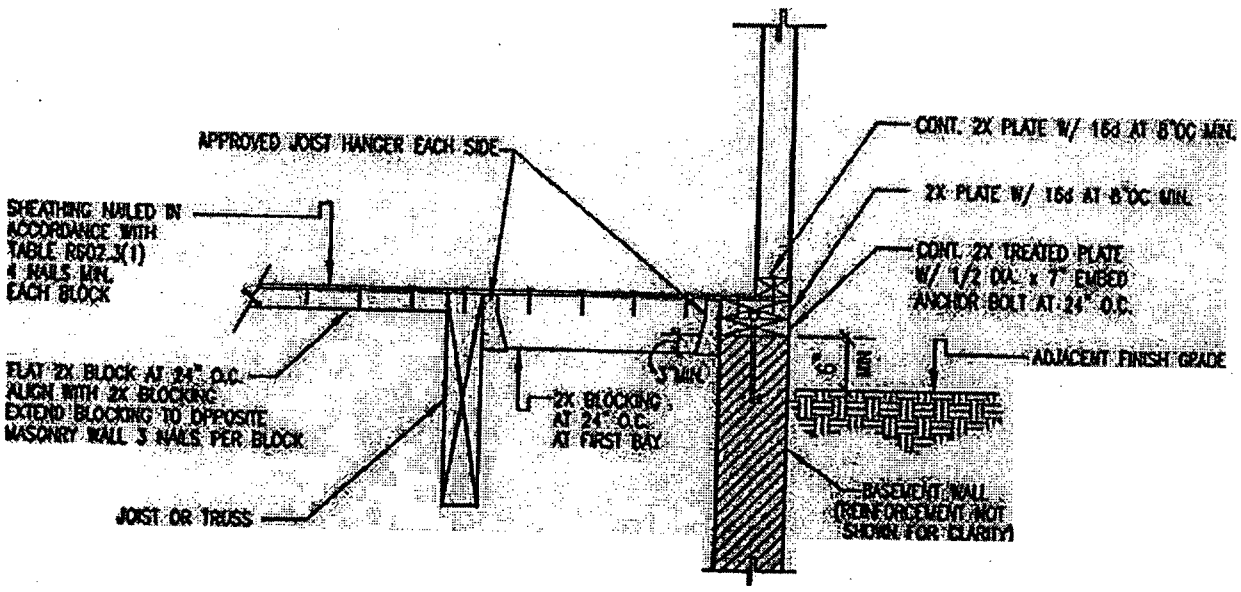
LEDGER BOLT SPACING AND SIZE[1]

JOIST SPAN	JOIST PERPENDICULAR TO WALL		JOIST PARALLEL TO WALL	
	BOLT SIZE AND SPACING		BOLT SIZE AND SPACING	
	ROOF	FLOOR	ROOF	FLOOR
10 FT.	1/2" AT 2 FT. 0 IN. 3/4" AT 2 FT. 0 IN.	1/2" AT 1 FT. 4 IN. 3/4" AT 2 FT. 0 IN.	1/2" AT 2 FT. 0 IN.	1/2" AT 1 FT. 4 IN. 3/4" AT 2 FT. 8 IN.
10-15 FT.	(2) 1/2" AT 2 FT. 0 IN. 3/4" AT 2 FT. 0 IN.	(2) 1/2" AT 2 FT 0 IN. 3/4" AT 1 FT. 4 IN.	3/4" AT 2 FT. 0 IN.	3/4" AT 2 FT. 8 IN.
15-20 FT	(2) 1/2" AT 2 FT. 0 IN. 3/4" AT 1 FT. 4 IN.	(2) 1/2" AT 1 FT 4 IN. (2) 3/4" AT 2 FT. 0 IN.	3/4" AT 2 FT. 0 IN.	3/4" AT 2 FT. 0 IN.

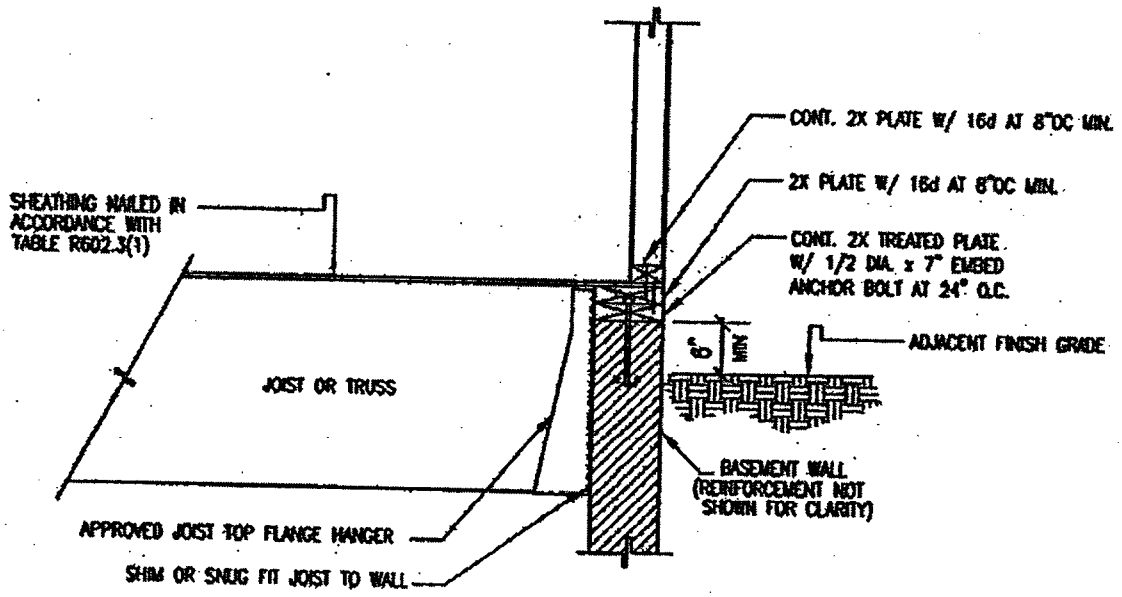
1. BOLTS SHALL BE INSTALLED WITH A METAL PLATE, METAL STRAP, OR WASHER NOT LESS THAN A STANDARD CUT WASHER BETWEEN THE WOOD AND THE BOLT HEAD AND BETWEEN THE WOOD AND THE NUT.

NOTE: WHERE BOLTS ARE LOCATED IN HOLLOW MASONRY, THE CELLS IN THE COURSES RECEIVING THE BOLT SHALL BE GROUTED SOLID.
FOR SI: 1 INCH = 25.4 MM, 1 FOOT = 304.8MM, 1 POUND PER SQUARE FOOT = 0.0479KN/M^2

FIGURE R606.10(1)
ANCHORAGE REQUIREMENTS FOR MASONRY WALLS LOCATED IN SEISMIC DESIGN CATEGORY A, B, C OR D1 AND WHERE WIND LOADS ARE LESS THAN 30 PSF



JOIST PARALLEL TO BASEMENT WALL



JOIST PERPENDICULAR TO BASEMENT WALL

NOTE: WHERE BOLTS ARE LOCATED IN HOLLOW MASONRY, THE CELLS IN THE COURSES RECEIVING THE BOLT SHALL BE GROUTED SOLID.
FOR SI: 1 INCH = 25.4 MM, 1 FOOT = 304.8MM, 1 POUND PER SQUARE FOOT = 0.0479KN/M

FIGURE R606.10(1) CONTINUED
ANCHORAGE REQUIREMENTS FOR MASONRY WALLS LOCATED IN SEISMIC DESIGN CATEGORY A, B, C OR D1 AND WHERE WIND LOADS ARE LESS THAN 30 PSF

Figure R606.10(3) REQUIREMENTS FOR REINFORCED MASONRY CONSTRUCTION IN SEISMIC DESIGN CATEGORY D_1 OR D_2

Figure 606.10(3) is amended as follows:

The thickness of the footings as shown in this figure is 6 inches. The thickness of the footing shown in the "Foundation for wood floor" detail and the "Foundation for concrete floor" detail is amended from 6 inches (152 mm) to 12 inches (305 mm).

Detail "A" shall be amended to reflect the Dowel and Rod detail is not 3/8 inch but shall be a # 4 reinforcing bar in accordance with Table R606.11.3.2.

R606.13 Beam supports

Subsection R606.13 is amended to read as follows:

R606.13 Beam supports. Beams, girders or other concentrated loads supported by a wall or column shall have a bearing of at least 3 inches (76 mm) in length measured parallel to the beam upon solid masonry not less than 4 inches (102 mm) in thickness, or upon a metal bearing plate of adequate design and dimensions to distribute the load safely. (The remainder of the section is deleted.)

R606.13.1 Joist bearing

Subsection R606.13.1 is amended to read as follows:

R606.13.1 Joist bearing. Joists shall have a bearing of not less than 2-1/2 inches (63.5 mm) or as necessary to accept end nailing or connectors, except as provided in Subsection R606.13, and shall be supported in accordance with Figure R606.10(1).

R609.1.4 Grout placement

Subsection R609.1.4 is amended to read as follows:

R609.1.4 Grout placement. Grout shall be a plastic mix suitable for pumping without segregation of the constituents and shall be mixed thoroughly. Grout shall be placed by pumping or by an approved alternate method and shall be placed before any initial set occurs and in no case more than 1-1/2 hours after water has been added. Grouting shall be done in a continuous pour, in lifts not exceeding 5 feet (1524 mm) or in accordance with Subsection R609.4.1. It shall be consolidated by puddling or mechanical vibrating during placing and reconsolidated after excess moisture has been absorbed but before plasticity is lost.

R703.6.2.1 Weep screeds

A new Subsection R703.6.2.1.1 is added to read as follows:

R703.6.2.1.1 Weep screeds with stem wall. Where requirements of this code may impose a potential non-compliant weep screed clearance from earth or paved areas, a concrete or masonry stem wall

designed for compliance with the required clearances shall be provided for these areas.

R801.3 Roof drainage

Subsection R801.3 is deleted in its entirety without replacement.

SECTION R802 WOOD ROOF FRAMING

Section R802 is amended by adding at the beginning, before Subsection R802.1, a new paragraph to read as follows:

Applicability limits. The provisions of this Section R802 shall control the construction of wood roof framing for buildings not greater than 60 feet (18288 mm) in length perpendicular to the joist, rafter or truss span, and not greater than 36 feet (10973 mm) in width parallel to the joist span or truss.

R802.6 Bearing

Subsection R802.6 is amended to read as follows:

R802.6 Bearing. The ends of each rafter or ceiling joist shall bear the full width on wood or metal and not less than 3 inches (76 mm) on masonry or concrete.

R802.7.1 Sawn lumber

Subsection R802.7.1 is amended to read as follows (with no change to the Exception):

R802.7.1 Sawn lumber. Notches in solid lumber joists, rafters and beams shall not exceed one-sixth of the depth of the member, shall not be longer than one-third of the depth of the member and shall not be located in the middle one-third of the span or the end one-sixth of the span. The tension side of members 4 inches (102 mm) or greater in nominal thickness shall not be notched. The diameter of the holes bored or cut into members shall not exceed one-third the depth of the member. Holes shall not be closer than 2 inches (51 mm) to the top or bottom of the member, or to any other hole located in the member. Where the member is also notched, the hole shall not be closer to the notch than the depth of the member.

R802.9 Framing of openings

Subsection R802.9 is amended to read as follows:

R802.9 Framing of openings. Openings in roof and ceiling framing shall be framed with header and trimmer joists. When the header joist span does not exceed 4 feet (1219 mm), the header joist may be a single member the same size as the ceiling joist or rafter. Single trimmer joists may be used to carry a single header joist that is located within 3 feet (914 mm) of the trimmer joist bearing. When the header joist span exceeds 4 feet (1219 mm), the trimmer joists and the header joist shall be doubled and of sufficient cross section to support the ceiling joists or rafter framing into the header. Approved hangers shall be used for the header joist to trimmer joist connections when the header joist span exceeds 6 feet (1829 mm). Tail joists over 12 feet (3658 mm) long shall be supported at the header by framing anchors.

R802.10.1 Truss design drawings

Subsection R802.10.1 is amended so that the introductory paragraph, before Items 1-12, reads as follows:

R802.10.1 Truss design drawings. Truss design drawings, prepared in compliance with Subsection R802.10.1, shall be provided to the building official and approved prior to fabrication. Truss design drawing shall be provided with the shipment of trusses delivered to the job site. Truss design drawings shall include, at a minimum, the information specified below:

R802.10.5 Truss to wall connection

Subsection R802.10.5 is amended to read as follows:

R802.10.5 Truss/rafter to wall connection. Trusses and rafters shall be connected to wall plates by the use of approved connectors having a resistance to uplift not less than 175 pounds (79.45 kg) and shall be installed in accordance with manufacturer's specifications. For roof assemblies subject to wind uplift pressures of 20 pounds per square foot (0.958 kN/m^2) or greater, as established in Table R301.2(2), adjusted for height and exposure per Table R301.2(3), see Subsection R802.11.

R804.3.1 Allowable ceiling joist spans

Subsection 804.3.1 is amended to read as follows:

R804.3.1 Allowable ceiling joist spans. The clear span of cold-formed steel ceiling joists shall not exceed the limits set forth in Table R804.3.1(1) or R804.3.1(2). Ceiling joists shall bear full length on the walls and may be slope cut even with the top of the rafter to match the slope of the roof. The ceiling joist shall have a minimum bearing length of 1.5 inches (38 mm) between the edge of the wall and the beginning of the slope cut and shall be connected to rafters (heel joint) in accordance with Figure R804.3.1(1) and Table R804.3.1.(3). When continuous joists are framed across interior bearing supports, the interior bearing supports shall be located within 24 inches (610 mm) of midspan of the ceiling joist, and the individual spans shall not exceed the applicable spans in Table R804.3.1(1) or R804.3.1(2). Where required in Table R804.3.1(1) or R804.3.1(2), bearing stiffeners shall be installed at each bearing location in accordance with Subsection R804.3.8 and Figure R804.3.8. When the attic is to be used as an occupied space, the ceiling joists shall be designed in accordance with Section R505.

R903.4.1 Overflow drains and scuppers

Subsection R903.4.1 is amended to add a new sentence at the end of the second paragraph to read as follows:

Roof drainage water from a building shall not be allowed to drain to adjacent properties and shall not be allowed to accumulate adjacent to any building.

R1007 FIREPLACES–ADDITIONAL LIMITATIONS AND REQUIREMENTS

A new Section R1007 and two new Subsections R1007.1 and R1007.2 are added to read as follows:

SECTION R1007 FIREPLACES–ADDITIONAL LIMITATIONS AND REQUIREMENTS

R1007.1 Permissible types of fireplaces. No fireplace shall be constructed in any residential dwelling unit in Boulder City or within the Las Vegas Valley Hydrographic Basin at an elevation of less than 4000 feet (1220 m) above sea level unless it is one of the following:

1. A fireplace equipped with gas logs with a nationally recognized listing approved by the building official;
2. A dedicated natural gas burning factory-built fireplace with a nationally recognized listing approved by the building official;
3. A dedicated wood-burning factory-built enclosed fireplace or heater that conforms to the "Phase II Environmental Protection Agency, Standards of Performance for New Stationary Sources, New Residential Wood Heaters" as prescribed in 40 CFR Part 60, Subpart AAA, as verified by a nationally recognized listing approved by the building official;
4. A masonry fireplace that includes the installation of a wood-burning insert which meets the standards described in Paragraph 3 of this section and which is installed in accordance with the insert manufacturers instructions; or
5. A decorative electrical appliance with a nationally recognized listing approved by the building official.

R1007.2 Fireplace requirements. A gas or wood-burning fireplace installed within a dwelling unit shall comply with the following requirements:

1. The fireplace opening shall be provided with solid doors such as glass, solid steel or cast iron.
2. If the fireplace is located in a sleeping room or an adjacent bathroom, then a permanent unobstructed fresh air supply shall be provided directly from the exterior of the structure to the firebox.
3. When gas is piped to the fireplace, a caution sign shall be installed that states "Caution: Damper must be permanently blocked open if gas is supplied to this fireplace." The letters on the sign must be a minimum of 3/8 inches in height.

N1101 GENERAL

Section N1101 including its constituent subsections, is deleted in its entirety and replaced with a new Section N1101, together with a new Subsection N1101.1 and a new Subsection N1101.1.1, to read as follows:

SECTION N1101 GENERAL

Subsection N1101.1 Scope. This chapter governs the design and construction of buildings for energy efficiency.

Subsection N1101.1.1 Criteria. Buildings shall be designed and constructed in accordance with the CABO 1992 Model Energy Code, and the Supplemental Document with amendments thereto, as adopted by Chapter 16.52 of the Las Vegas Municipal Code.

N1102 BUILDING ENVELOPE

Section N1102, including its constituent subsections, is deleted in its entirety without replacement.

APPENDIX H PATIO COVERS

AH102 DEFINITION

Section AH102 is amended by adding an exception following the definition of "Patio Covers," to read as follows:

Exception: In the case of an attached patio cover that shares a common wall with the main structure, the existing common wall and the openings of the main structure shall not be removed or modified except in order to comply with structural requirements.

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CITY CLERK

2003 NOV 14 P 3:44

AFFP DISTRICT COURT
Clark County, Nevada

AFFIDAVIT OF PUBLICATION

STATE OF NEVADA)
COUNTY OF CLARK) SS:

Donna Stark, being 1st duly sworn, deposes and says:
That she is the Legal Clerk for the Las Vegas Review-Journal and the Las Vegas Sun, daily newspapers regularly issued, published and circulated in the City of Las Vegas, County of Clark, State of Nevada, and that the advertisement, a true copy attached for,

LV CITY CLERK 2296311LV
3056543

was continuously published in said Las Vegas Review Journal and/or Las Vegas Sun in 1 edition(s) of said newspaper issued from 11/07/2003 to 11/07/2003, on the following days: NOV. 7, 2003

Signed: Donna Stark

SUBSCRIBED AND SWORN BEFORE ME THIS THE 12

day of November 2003

Mary B. Sheffield

Notary Public

MARY B. SHEFFIELD
Notary Public State of Nevada
No. 99-53968-1
My appt. exp. Mar. 8, 2007

BILL NO. 2003-83

AN ORDINANCE TO ADOPT AS THE CITY'S BUILDING CODE THE 2003 EDITIONS OF THE INTERNATIONAL BUILDING CODE AND INTERNATIONAL RESIDENTIAL CODE, TOGETHER WITH AMENDMENTS THERETO, AND TO PROVIDE FOR OTHER RELATED MATTERS.

Proposed by: Paul K. Wilkins, Director of Building and Safety
Summary: Adopts the 2003 Editions of the International Building Code and the International Residential Code, together with amendments thereto.

At the Special City Council meeting of OCTOBER 29, 2003 BILL NO. 2003-83 WAS READ BY TITLE AND REFERRED TO A RECOMMENDING COMMITTEE

COPIES OF THE COMPLETE ORDINANCE ARE AVAILABLE FOR PUBLIC INFORMATION IN THE OFFICE OF THE CITY CLERK, 1ST FLOOR, 400 STEWART AVENUE, LAS VEGAS, NEVADA.
PUB: November 7, 2003
LV Review-Journal

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CITY CLERK

2003 DEC -2 P 4:50

AFFP DISTRICT COURT
Clark County, Nevada

AFFIDAVIT OF PUBLICATION

STATE OF NEVADA)
COUNTY OF CLARK) SS:

Donna Stark, being 1st duly sworn, deposes and says:
That she is the Legal Clerk for the Las Vegas Review-Journal and the Las Vegas Sun, daily newspapers regularly issued, published and circulated in the City of Las Vegas, County of Clark, State of Nevada, and that the advertisement, a true copy attached for,

LV CITY CLERK 2296311LV
3079671

was continuously published in said Las Vegas Review Journal and/or Las Vegas Sun in 1 edition(s) of said newspaper issued from 11/22/2003 to 11/22/2003, on the following days: NOV. 22, 2003

BILL NO. 2003-83
ORDINANCE NO. 5636

AN ORDINANCE TO ADOPT AS THE CITY'S BUILDING CODE THE 2003 EDITIONS OF THE INTERNATIONAL BUILDING CODE AND INTERNATIONAL RESIDENTIAL CODE, TOGETHER WITH AMENDMENTS THERETO, AND TO PROVIDE FOR OTHER RELATED MATTERS.

Proposed by: Paul K. Wilkins, Director of Building and Safety
Summary: Adopts the 2003 Editions of the International Building Code and the International Residential Code, together with amendments thereto.

The above and foregoing ordinance was first proposed and read by title to the City Council on the 29th day of October, 2003, and referred to a committee for recommendation; thereafter the committee reported favorably on said ordinance on the 19th day of November, 2003, which was a regular meeting of said City Council; and that at said regular meeting the proposed ordinance was read by title to the City Council as amended and adopted by the following vote:

VOTING "AYE": Mayor Goodman and Councilmembers Reese, L. Brown, L.B. McDonald, Weekly, Mack, and Moncrief
VOTING "NAY": NONE
EXCUSED: NONE

COPIES OF THE COMPLETE ORDINANCE ARE AVAILABLE FOR PUBLIC INFORMATION IN THE OFFICE OF THE CITY CLERK, 1ST FLOOR, 400 STEWART AVENUE, LAS VEGAS, NEVADA.
PUB: Nov. 22, 2003
LV Review-Journal

Signed: Donna Stark

SUBSCRIBED AND SWORN BEFORE ME THIS THE 25

day of November 2003

Mary B. Sheffield

Notary Public

MARY B. SHEFFIELD
Notary Public State of Nevada
No. 99-53968-1
My appt. exp. Mar. 8, 2007